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ORIGINAL ARTICLES.

HYDROTHERAPY IN TYPHOID FEVER.

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THE Brand method of treatment of typhoid fever, with or without modifications, has been so enthusiastically indorsed in this country by Baruch, Osler, and other eminent clinicians, that it is with some hesitancy that I offer a paper which, though not strictly antagonistic to the immersion-treatment, nevertheless represents strongly conservative views.

We may say, approximately, that at present all the typhoid patients in hospital wards in this country are treated by immersion, and all the private patients by methods that are hydrotherapeutic only to the extent of cool sponging. Such a statement is not literally true, but the exceptions are certainly rare. It is also probably true that though most expressions of opinion heard in societies or read in journals favor the Brand treatment, or its modifications, a secret ballot would show an overwhelming majority of the profession against this method. Neither the discussion nor the vote, however, would be decisive as to the merits of the issue. We must ask, rather, what the opportunities for observation, and what the ability for forming an opinion on the two sides. In Buffalo, with a population of 350,000 inhabitants, we may expect about 500 cases of typhoid annually. Of these, 200 will be treated in hospitals, leaving about 300 cases to be divided among the 500 practitioners of the city. It is obvious, therefore, that the average physician treats a very small number of cases. However, it must be admitted that with the exception of the open country, and a few cities with unusually good water-supply, the figures given do not adequately represent the prevalence of typhoid, and that the private practitioner of the small towns has not only relatively, but absolutely, better opportunities for studying typhoid than has his city colleague. We must also bear in mind that "experience" does not mean a census of cases, that one may acquire more real experience from watching one case than another from treating fifty, and that with equal powers of observation the man who has seen ten cases is almost as well equipped as the one who has had a hundred. All things considered, we must conclude that the question as to the immersion-treat-

ment of typhoid fever has excellent advocates on both sides, so that no one need hesitate to express an opinion through fear of lack of support.

Experience with antipyretic drugs has exploded the old notion that elevated temperature is the essence of a fever. Within a limited range, say between 101.5° and 103.5° , the temperature is not necessarily an index of the severity of the disease, and one of the ablest clinicians of the country has said that an evening temperature of 103° in typhoid may be considered as normal to the disease, and as requiring no interference. Advocates of the strict Brand treatment do not claim that the baths are decidedly antipyretic, but regard a marked lowering of the temperature as throwing doubt on the diagnosis. Others, however, do use the immersion-bath to reduce temperature, and still regard themselves as followers of Brand. To facilitate reference I will number and italicize certain propositions that I would like to submit:

1. *If a temperature becomes so high that it must be brought down (103° or 103.5° and over), antipyretic means should be selected that will produce the least shock. Immersion will rarely fulfil this requirement, even its advocates admitting it to be painful.*

2. *It is bad practice to cool a fevered body by plunging it into ice-cold water as one would cool the contents of a hot test-tube. In general, cool sponging of one part of the body at a time is to be preferred. Occasionally an antipyretic drug, such as acetanilid, phenacetin, phenocoll, or lactophenin, may be used.*

3. *Any bath below the temperature of the body has the power of abstracting heat, and if it produces chilliness or symptoms of mild shock, it is a cold bath, whether the absolute temperature be 60° or 95° .*

In any infectious disease there is the obvious indication of removing waste-products.

4. *The cold bath—as just defined—removes comparatively little excrementitious matter from the body, it checks any existing tendency to sweating, and throws the blood inward to organs already infiltrated or irritated by toxic principles. It is claimed that the baths increase the renal elimination. Many of the case-reports brought forward to support this theory simply cite the quantity of urine passed. Comparing this quantity with the amount of fluid nourishment and water drunk, and considering the possibility of still further absorption of water through the skin, it is obvious that three alternatives confront the patient—diarrhoea, excessive diuresis, or dropsy.*

5. *The fact that much urine is passed, or even that urinary solids are increased during treatment by immersion, does not show that the kidneys are acting in a more healthful manner, but that they are being subjected to greater strain.*

6. *The immediate effect of cool immersion is to cause congestion of the internal organs, adding fuel to the inflammatory foci and embarrassing the heart, lungs, liver, spleen, and kidneys, whose functions are already severely taxed by disease.*

7. *The fact that the patient leaves the bath with blue lips and chattering teeth is not simply an æsthetic objection, as has been declared.*

If the immersion-treatment is not markedly and directly antipyretic—and the strict disciples of Brand say that it is not—and since it is not an aid to elimination—even granting that elimination is not interfered with—what is its *modus operandi*? Dr. Baruch, one of the ablest advocates of the method, ascribes to it tonic properties, explicable on the theory of increased phagocytosis. Now, the undoubted benefits of cold bathing for persons of debilitated but not diseased constitutions may well be explained on the theory that the functions of the leucocytes are stimulated; but the writer's prejudice against the immersion-treatment of typhoid fever rests largely on a study of the effects of bathing and swimming on healthy or comparatively healthy persons. The temperature of still lake-water, near shore, whatever the size of the lake—excepting a few very deep and cold lakes fed by subaquatic springs—is about the same, and on sunny summer days varies from 70° to 85°. The writer has studied for three summers—not to mention less systematic observations for a much longer period—the effects of swimming on some two hundred persons, mostly boys of about fourteen, but including a number of girls and women, and of all ages from four to seventy. It should be said that the observations were direct and not statistical, a bathing-suit not affording the conveniences for taking accurate notes. As the conclusions reached have a direct bearing on the subject of the paper, they are numbered consecutively with the other propositions submitted.

8. *Except for menstruation and previous lack of physical training, sex has no modifying influence on the effects of bathing.*

9. *Other things being equal, young children seem to endure bathing better than older people, probably because their circulation is more rapid and because they usually swim in shallower and warmer water.*

10. *When air and water are warm, persons of average vigor can safely bathe twice daily. More frequent baths produce depression in all but the most robust.*

11. *Under the most favorable circumstances the bath should not be prolonged beyond half an hour, and for most persons fifteen minutes is the proper limit.*

12. *Drying and dressing should never be postponed after subjective or objective symptoms of chill present themselves.*

I have often noticed boys with livid or almost white lips who persisted in the declaration that they were not cold. I was compelled to doubt their truthfulness, especially as indifference to this rule resulted in diminished strength, in lagging at games and other athletic exercise, and in loss of appetite, and predisposition to colds, transient dyspepsia, etc.

Can we expect that the typhoid-fever patient will receive all the benefit from immersion that a healthy person gains and be immune from the possible disadvantages? The advocates of immersion practically answer this question in the affirmative. The genuine Brand bath employs water of about the same temperature as that of the surface of a lake on a warm summer day. As often—perhaps usually—practised, the temperature is about what the swimmer finds on a cool day or after the water has been stirred up by a storm. The period of immersion is practically the same as that assigned for lake-bathing under favorable circumstances, and twice that allowable for bathing in cool water. Thus we may say that:

13. *The average immersion-bath is as cold and as long-continued and is repeated from two to four times as often as that which a healthy swimmer of average vigor can endure without evident depression.*

14. *The typhoid patient has not the benefit of exercise during or after the bath, nor of increased circulation and respiration inevitable in the effort to keep the nose above the surface of the water.*

15. *If the typhoid patient is to be immersed at all, he must be lifted to and from the tub with the greatest care; he must be thoroughly dried and warmed with towels, and the same water must not be used for several patients.*

How is the typhoid patient protected from the ill effects which would be inevitable in a healthy person from bathing similar in temperature, duration, and lack of exercise? Speaking from purely physical consideration of the subject, we may say that the elevated temperature of the disease protects him; but—

16. *There seems to be something more than mere abstraction of heat-units in the depression subsequent to bathing.*

Aside from the nervous and semi-hysterical shock which girls and even men unaccustomed to swimming experience from entering deep water, it is noticed that young children bathing in the shallowest and warmest water, and who present no evidence of chilliness, are gradually weakened by too long and too frequent bathing. Much of the so-called malaria after vacations is due to what some physician has termed water-soaking. The word is not scientific, and I cannot furnish a rational explanation,

but the fact of depression following a course of bathing without obvious chilling is well established.

After all *a priori* arguments, there remains to be considered the magnificent accumulation of statistics in favor of the immersion-treatment of typhoid. However, it must be recognized that, while figures do not lie, they may be as misleading as certain persons who are literally truthful. It is easy enough to complete a certain kind of statistics to show that tobacco, alcohol, and narcotics in general conduce to longevity; every new drug, however worthless it may prove to be, comes to us supported by unimpeachable authority and unanswerable case-reports. Anyone who has tried to generalize from his own case-records, without attempting to prove any particular theory, knows how often he is puzzled as to the classification of individual cases, and can realize how easily such cases may be made to support either side of an argument. Typhoid is the only common specific disease that lies within my field of practice, and it is unpleasant to feel that I am in opposition to the best and most modern authorities; yet I am comforted by the outcome of similar conservatism in regard to the therapeutic properties of testicle-juice and tuberculin. It is not possible at the present time to refute the case-reports of hospital attendants nor to show that the "post hoc, propter hoc," fallacy has been committed. Yet the following considerations must be borne in mind:

17. *In comparing death-rates the advocates of immersion very properly exclude fulminating and neglected cases from their own tables, but ignore the fact that just such cases swell the general mortality.*

18. *The average death-rate of properly treated typhoid cases according to any of the older methods is not so high as 20 or 30 per cent., as the immersionists sometimes declare.*

19. *Many, if not the majority, of ward-patients are stimulated by the ordinary comforts of cleanliness, warmth and even temperature, regular and comparatively wholesome feeding, etc.; whereas patients in private practice are accustomed to and require a higher scale of physical comfort.*

20. *The advocates of the immersion-treatment include in their statistics many cases which have had but few baths, and which an unbeliever would say recovered in spite of, rather than on account of, immersion.*

21. *Hemorrhage, shock, etc., prevent the carrying out of the immersion-treatment in many instances.*

22. *Actual shock is sometimes observed by the advocates of the immersion-treatment, but is usually relieved by prompt stimulation.*

I have, in another paper, alluded to a patient whose temperature went down nine degrees after a bath. So far as statistics show, this case favors the immersion-treatment, yet a glance at the bedside-record will convey exactly the opposite lesson.

23. *We may well doubt the good faith of some who*

practise immersion in hospitals, but who do not urge it on their private patients.

24. *The claim that the immersion-treatment expedites convalescence and leaves the heart without the usual post-typhoid weakness, is denied by many physicians who have had charge of patients after their discharge from hospitals.*

In conclusion, let me say that I am not writing to support a theory, nor to assail the advocates of an opposite theory, but to elicit the truth. I am open to conviction and ready to acknowledge an error.

ON THE VALUE OF THE COMPARATIVE METHOD IN THE STUDY OF PATHOLOGY.¹

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(Concluded from page 119.)

AMONG the most remarkable phenomena pertaining to cells is the peculiar tendency to reappearance of traits and qualities peculiar to remote ancestors, and quite out of keeping with cells in their present locations. Sutton divides these into *vestigia*, or those affecting whole organs or races, and *degenerations*, or those affecting general groups of tissues. It is the partial reappearance of traits and qualities peculiar to some remote ancestor which we speak of as *vestigia*. Among these are most prominent, for example, the congenital malformations of the ear and the appearance of rudimentary or additional auricles. In fact, the whole arrangement of the external ear shows atavism toward the type of the carnivora and herbivora, the rudimentary and now useless muscles pointing clearly to the movable ear of those orders. But the human ear points further back than this, and by its development from the remains of the first branchial cleft points distinctly to fish-ancestors and gill-covers, the auricle being the relic of the operculum. Other relics of the opercula appear in the appendages so well described by Sutton as cervical auricles—i. e., the little tags which make their appearance along the anterior border of the sterno-mastoid. That these are not mere freaks is shown by the fragments of cartilage, muscle-fibres, etc., which they contain. These appendages may be cystic or open, forming diverticula to such an extent that fistulous passages may extend clear through to the pharynx, forming the so-called branchial fistule.

But it is rather to another aspect of the embryology of the head and neck, especially in its ontogenetic and surgical relations, that I would like for a few moments to invite your attention. Sutton has shown (*Journ. of Anat. and Phys.*, vol. xviii. p. 28, "A Critical Study of Cranial Morphology") that the bony framework of the skull, morphologically considered, is a mere addition to the original primary cranium, which is in reality represented by

the dura. Very early in embryonic life the dura and the skin are in contact, while the basal and lateral portions of the cranium gradually chondrify, thus separating these two structures. We too often forget that the skin and dura are in contact along the various sutures, often for a year after birth, and that this close relation persists longest in the region of the fontanelles and the torcular. The practical bearing of this is that the formation of an intracranial dermoid, by inclusion within the rapidly growing cranium of a few dermal or epiblastic elements, is not difficult to understand. The pedicle of such a cyst or tumor may easily become surrounded by the rapidly forming new bone, in which case the cyst may be entirely covered, or may be with or without some trifling fibrous connection with the overlying scalp.

But of much more importance than this is the original communication between the primary alimentary canal and the central neural canal. Additional facts proving both the anterior and posterior communication of these original canals have only been recently brought to light, and are of sufficient importance to justify some description in this connection. Some fifteen years ago Owen attempted, unsatisfactorily, to show that the gullet of ancestral vertebrates was continuous with the third ventricle, and that the space from the pineal to the pituitary bodies by way of the infundibulum represented this primary gullet. He had, however, been preceded by Dohrn, who thought that the fourth ventricle marked the place where the oesophagus pierces the nervous ring. It has remained, however, for Gaskell and Sutton to show that the tube which now represents the central nervous system in the invertebrates is really the disused segment of the former primary canal. These two scholars, working independently, have arrived at fundamentally the same results. They have profited by Hertwig's investigations, who has shown that the original pleuro-peritoneal cavity is a derivative of the fundamental alimentary canal, arising as two separate diverticula whose central portions persist as the permanent alimentary canal, while the lateral portions coalesce to form a common pleuro-peritoneal chamber. This fact is of no small importance, both from the embryological and the pathological standpoints, since it shows how the cells lining the peritoneum are really of original hypoblastic origin, and that the pleuro-peritoneal cavity is represented in the invertebrates in the so-called gastrula-stage of inversion of the exterior surface.

In the very young embryo we find a fundamental U-shaped tube, from whose anterior branch is developed the alimentary canal, and from whose posterior branch, representing the notochord with its central neural canal, are formed the brain and spinal cord. This tube is lined by a continuous layer of

columnar epithelium, and terminates at the cephalic end by a cul-de-sac. The anterior branch is widely open to the yolk-sac, and this becomes connected with the exterior by an epiblastic involution which opens up the cephalic end of the now primary gut; while at the same time a diverticulum, the so-called pouch of Rathke, makes its way in the direction of the cephalic end of the other branch of the original tube, uniting with it, in fact, by an analogous diverticulum produced from the other side, to which I shall recur in a minute. Again, at the caudal extremity there is another involution of the surface, where an opening is established. All that remains of the anterior branch of the primary U-shaped tube between this division and the posterior branch, known as the post-anal gut, is represented in the adult by Luschka's or the coccygeal gland. Occupying the flexure of the tubes is a chain of sympathetic ganglia with branches to each section. The anterior branches ramify in the walls of the bowel and develop intrinsic ganglia and plexuses, with which the names of Auerbach and Meissner are closely associated; while those going to the posterior disappear in its substance, join with groups of nerve-cells developed in the thickness of its walls, and form the gray matter of the spinal cord. In this way certain nerves persist and bring these two systems into close relationship; these are known as the splanchnic. Thus it will be seen that in the dorsal section development is in the direction of nerve-cells, while in the ventral section development is rather into muscle-cells, the two being associated by the splanchnic nerves. The epithelium lining the posterior tube fails to develop; that lining the anterior becomes highly specialized for digestive purposes. Although it may disillusionize some of us, it is, nevertheless, to be stoutly maintained that the canal of the central nervous system is really of intestinal origin, as shown by their original continuity, their similarity in fashion of development, their correspondence in point of time, their close inter-relation through the splanchnic nerves, and by the association of numerous malformations of the central canal of the cord with deformities of the alimentary canal.

What, now, is to be said of the anterior communication of these canals? If one will take the trouble to dissect carefully the macerated sphenoid bone of a six or seven months' foetus (or younger), he will find it to contain much fibrous tissue, in the midst of which he will detect a small canal that may be entered, sometimes even in the foetus at birth, by a small probe introduced in a minute recess of the mucous membrane exactly in the middle line of the nasopharynx, close up to the base of the skull. This pocket, often half an inch deep, is known as the bursa pharyngea, and may often be seen in the adult. It marks the pharyn-

geal termination of what is known as the cranio-pharyngeal canal. It would be noticed much oftener were it not surrounded by a collar of lymphoid tissue, known as the pharyngeal tonsil, corresponding to the collections of lymphoid tissue which mark the site of other obsolete canals. The internal opening of this canal is to be found in the floor of the sella turcica. This is the remains of the diverticulum already alluded to, which has made its way from the cavity produced by the infolding of the integument at the cephalic end of the anterior branch of the original U-shaped tube.

The remains of the other diverticulum, extending anteriorly from the upper end of the posterior branch, are to be seen in the fourth and third ventricles and their communication with the infundibulum. Here, again, the relation of the pituitary body and the so-called pineal gland to this anterior neurenteric communication is most interesting and most important. The structure of the pituitary body is so often likened to that of the thyroid, the thymus, the adrenals, etc., which are all of obscure origin, that anything shedding light in this direction is of great interest. According to this view we must, then, regard the pituitary body as the intracranial lymphoid tissue, which again marks the site of this obsolete canal. I think the investigations of Beard, Gaskell, and Sutton may now be regarded as clearly establishing this fact. Wiedersheim also regards what he calls the pineo-pituitary tract as the primitive mouth-part, archæostoma, or gullet of the ancestors of the vertebrates, the present mouth (neostoma) being an ingrowth, as indicated, between two branchial arches. If in this way the pituitary body can be shown to have, embryologically at least, a more intimate relation with the alimentary system, it may help to shed light where it is much needed—upon the obscure etiology of such a disease as acromegaly.

This brings up also the proper position of the pineal gland, so-called. Within a few years we have been taught that this is the remains of the pineal eye, or that it is to be classed as an original and perhaps rudimentary sense-organ. But later researches have failed to confirm this theory, since it has nowhere been found functional. I may quote a statement from Prof. Woods Hutchinson, nephew of Jonathan Hutchinson, who states in a letter to me:

"I have carefully compared all the plates and representations of this organ and its sections which I could procure, with the result of a decided conviction that all that can be said of this body is that it was an epithelium-lined cavity at some time, communicating both with the surface and the ventricular cavity of the brain; and it has as much the appearance of having been mouth and gullet as eye-bulb and optic nerve. I have also consulted

several morphologists upon the question, and they tell me that all one can definitely say is that it is the degenerated remains of an epithelial (cerebral) outgrowth of some description."

(See also editorial by him in *THE MEDICAL NEWS*, June 6, 1895: "Is the Brain an Appendage of the Alimentary Canal?")

If this view be accepted, a large class of hitherto mysterious processes and lesions is more susceptible of explanation than by any other theory yet devised.

Accepting, then, the pineo-pituitary-infundibular passageway as marking the site of the original anterior communication, let me again refer to the posterior communication between the neural and enteric canals, this being the lower part of the original U-shaped tube already alluded to. Here, first of all, is Luschka's gland, a mass of lymphoid tissue marking the site of the obliterated passage. The first to appreciate the true character of congenital coccygeal tumors and to associate them with this canal was Middeldorpf¹. These tumors, like all others developing from this lymphoid tissue, always assume dermoid characteristics, and are for the most part situated between the rectum and the cæcum, though when large they may make their way into various parts of the pelvis. (For example, I have lately successfully removed one from a man of fifty, which had pushed its way from within entirely out of the pelvis and had raised a conspicuous and tender prominence in the gluteal region, which almost completely disabled him. After removal it weighed four pounds.) These dermoids intrude themselves in all directions within the pelvis, and curious instances are recorded, many of them in the *London Pathological Transactions*. To the same general class belong also most of the congenital coccygeal tumors which figure in the monographs of Calbet² and others.

Per contra, equally well-marked dermoid tumors are met with in the original location of the infundibulum, especially in connection with the pituitary body. They have been described also as growing from the body of the sphenoid and projecting into the orbit or in other directions.³ And the same is true also of the lower end of the infundibular canal, dermoid tumors being often found in the vault of the pharynx; while adenomatous enlargement of the pharyngeal tonsil is extremely common, particularly in children.

The origin of dermoid tumors from this original lymphoid tissue in the neighborhood of obsolete canals has equal interest and importance in considering the embryology of the thyroid body, which arises as a separate diverticulum from the anterior

¹ Virch. Arch., vol. ci. p. 37.

² Contribution à l'Étude des Tumeurs Congénitales de la Région Sacro-coccygienne, Paris, 1893.

³ Lawson: Path. Soc. Trans., vol. xxxv. p. 379.

wall of the pharynx or floor of the mouth. In all but the lowest forms of vertebrates this diverticulum becomes completely shut off, and the duct leading to the developing thyroid is early rendered obsolete. In man it persists for a short time in the embryo, and is known as the thyro-hyoid duct, first described by His. By the time the hyoid bone has developed this duct has divided, that portion above becoming the lingual duct, that below remaining as the thyro-duct. This latter is often known as the *processus pyramidalis*, since it usually contains muscle-tissue, and has been described in most text-books of anatomy as the levator of the thyroid. When either of these ducts persists the fact is usually known by continuous shedding of epithelium, and perhaps discharge of sebaceous material. At times the ducts dilate into cysts of considerable size. Thus, I have recently had occasion to exsect such a cyst, the size of a hen's egg, from the floor of the mouth and base of the tongue in a young woman. The thyro-lingual duct originally opened upon the tongue at the point where now we have the lymphoid tissue known as the lingual tonsil. Along this location dermoids often develop, which may be central, unilateral, or bilateral, the central dermoids appearing, for the most part, as retention-cysts in the original thyro-lingual canal. It is worth while to remind you also that in case of epithelioma developing in this neighborhood the malignant process may extend rapidly down this canal and produce a perforating ulcer of the tongue—a melancholy instance of which recently occurred in a prominent officer of the army medical corps.

The thyroid duct should also completely disappear, but may persist, either as a duct extending from the thyroid isthmus to the hyoid bone, usually surrounded by muscle-tissue; or as a canal obliterated in the main, but presenting interrupted dilated portions—i. e., a series of cysts; or, lastly, it may be represented by a series of detached bodies, known ordinarily as accessory thyroids. These supernumerary thyroids are to be regarded always as the persistent remains of this original passage, and not in any other light. Both in the persistent or obliterated track, as well as in the thyroid body itself, cysts are most prone to develop, varying much in size, contents, rapidity of growth, etc. Some are multiple; some are single. The most interesting of them all are the dermoids, which are intimately related in structure to those dermoids found in connection with Luschka's gland and the post-anal gut. Fifty years ago von Ammon dealt with these in his remarkable treatise, and they have been frequently met with since then.

Another of the obsolete canals in the body to which too little attention is generally paid is that known as the vitello-intestinal duct, which originally connected the yolk-sac outside the embryo with

the developing alimentary canal. This occasionally fails to become obliterated as it should, and may then present either as a protruding vascular tumor at the umbilicus or as a form of umbilical and fecal fistula, or as a dermoid located within the abdominal parietes. (I have had occasion within a short time to operate on a young man who had nearly all his life had a discharging sinus from the umbilicus, into which a probe would pass three or four inches. Upon abdominal section, I found a minute external opening connecting interiorly with a good-sized cavity lined with epithelium, and this, again, connecting with the small intestine by a trifling orifice. The extirpation of the sac and the sinus with intestinal suture was sufficient to obviate completely the difficulty.)

Another form of umbilical fistula is that represented by pervious urachus. This is so commonly dealt with in text-books that, beyond reminding one that the urachus may be in part obliterated but presenting cystic dilatation in some portion, or that just at the outlet it may be connected with a dermoid growth, I will not detain you with its consideration.

The subject of branchial fistulæ is also one of great interest. This is now quite thoroughly dealt with in works now before the profession, and need call for but little attention here. Their study and recognition are entirely matters of the present century, for the most part of the latter portion. Heusinger made a most marked advance when, in 1864, he analyzed forty-six examples of the malformation (*Virch. Arch.*, vol. xxix.). These branchial fistulæ are the persistent remains of the original branchial or gullet clefts, and at present persist only among the fishes. They should all be closed long before birth, save only the first, which forms the tympanic or Eustachian canal. When the second remains open, in whole or part, it opens usually between the angle of the jaw and the sterno-mastoid muscle. When the third fails to close, the opening is situated opposite the thyro-hyoid space, close to the sterno-mastoid. The fourth, when open, presents just above the sterno-clavicular junction. This is the more commonly persistent of the three. Internally or within the pharynx these clefts present in the following locations: The second in Rosenmüller's recess, between it and the tonsil; the third and fourth, into the blind canal, called by His the precervical sinus, these being intimately related with the development of the thymus body. Thus the thymus is tissue intimately related to the lymphoid which marks all obsolete passages, the tonsils themselves bearing a very close relation to the second cleft.

These branchial clefts present either as complete fistulæ, external culs-de-sac, internal ditto, or cystic dilatation of intermediate portions, both orifices

being closed. It is now well established that certain pharyngeal diverticula are due to internal blind openings of these clefts. Watson (*Journ. of Anat. and Phys.*, vol. ix. p. 134) has described the most remarkable case on record of this general character. Sutton, moreover, has already made statement that certain of the so-called sebaceous cysts occasionally met with beneath the deep cervical fascia are in reality dermoids arising in persistent branchial remains, and, consequently, analogous to dermoids of the tongue originating in the lingual canal. Harrison Allen has recently thrown much light upon the little masses of glandular or adenoid tissue situated in the fauces, by showing that they are the relics of the second branchial clefts, the pharyngeal tonsil, of course, marking the lower opening of the infundibulum. It might be well just here to digress for an instant to remark that lymphoid tissue thus located, no matter where, about the body, is always peculiarly prone to infection like other degenerated tissues, and that when infected it succumbs most easily to disease. This is conspicuous about the appendix, for instance, where it so frequently leads to disaster. It is commonly seen, moreover, about the tonsils and other tissues scattered about the pharynx.

I should add further in this connection that the congenital fistulæ occasionally met with in the middle line of the neck are not to be confounded with branchial fistulæ, but are to be referred to persistent remains of the thyro-lingual or thyro-hyoid ducts.

There is always a tendency when we start at the top of that which has been growing to credit the growth with the tendency to rise. To judge fairly, however, one should start at the bottom, and begin by ascertaining how many other members of the group studied have taken other directions and partly or completely failed. The higher the place of an organism in the vegetable or animal scale the more restricted are the limits within which it is able to vary or to progress. As Coste has observed, few things are more instructive than the phenomena of blind alleys in evolution—that is, the evolution of certain growths along lines which stop abruptly, as if capacity for further development were wanting. Coste has followed out this line of reasoning in the vegetable kingdom in a very interesting way, but one which takes us too far from our present subject. (*New Science Review*, "Evolution and Teleology," July, 1895, p. 65.)

It often happens that the foliage proceeding from adventitious buds is very different from that of the rest of the plant. This is in accord with the theory of reversion, and these analogies are most common in the lower orders. Bud-formation is chiefly determined by nutritional conditions, and implies always relative excess. That is, the forces resulting in growth are in excess of the forces antagonistic to it.

Even the dreaded tumors may be viewed from the same standpoint as a reversionary process. When animals are hard pressed for existence they appear to become more prolific. This is notably true in the human race, which seems to have the highest degree of fertility where the struggle for existence is the most arduous. In the case of the infectious granulomata, for instance, cells multiply in soil already impoverished, but show inherited weakness by their incapacity for prolonged existence. In the presence of a specific virus of any kind these tissue-cells show a disposition "to be fruitful and multiply," as Hutchinson says, "no matter what comes of it."

Thus reversion to earlier type in the avian and reptilian stage is remarkably shown in our liver-cells, where the tendency so often is to the elimination of nitrogenous materials in the form of uric acid rather than of urea. The wide bearing of this reversionary tendency upon the very common malady known comprehensively as Bright's disease is apparent if we remember that the primary arterial lesions are, in all probability, due to the circulation in the blood of an uric-acid irritant, giving rise to the so-called arterio-capillary fibrosis. It is well known that among bipeds uric acid is eliminated by liver-cells without having undergone metamorphosis into urea, the urine of birds being solid instead of containing excretory material in watery solution. In fact, as Garrod says, "Our gouty patients are a sort of birds."

Certain nervous diseases possess characteristics justifying our regarding them as reversions to certain forms of activity normal in more or less remote ancestors. In the case of goitre, this has been practically established. It is curious, by the way, to note that goitre affects the lower animals almost always in those parts of the world where it is common in man. Horses are most liable; then dogs, calves, and lambs. Cows and sheep are not so liable. Cystic goitre in various small animals, like squirrels, has also been reported.

But perhaps nowhere does reversion or atavism manifest itself more conspicuously or unmistakably than in the mutual convertibility of skin and mucous membrane. The former, being subjected to more modifying influences, of course undergoes more frequent changes. Thus, it furnishes in various animals hair, feathers, bristles, quills, horns, scales, etc.; and in the lower animals it furnishes glands which secrete mucus, milk, poisonous fluids, or fluids loaded with calcium salts, by whose deposition shells or even pearls are formed. Moreover, these characteristics are maintained in dermoid cysts found in these same animals. Thus in sheep they contain wool; in cats, hair; in pigs, bristles; and in birds, feathers. It is well known, moreover, that gray hairs are occasionally met with among the very young. So, also, in young subjects dermoids occasionally, but rarely, contain gray hair.

The mucous membrane has been called "the internal skin." In some respects this is more than a mere happy expression, because from this membrane may be developed many of those structures which we find in or upon the skin. Its most distinctive feature is its epithelial covering, which is ordinarily hypoblastic, but which blends in the buccal cavity, for example, with the infolding of epiblastic epithelium, whose papillæ calcify and form teeth, and from which in many animals there develop hairy patches upon the inside of the cheek. Moreover, sebaceous glands are not confined to the skin, but are large and frequent; *e. g.*, in the mucous membrane of the nymphæ. *Per contra*, mucous glands occur in the skin of reptiles, worms, and fishes. Among the shell-fish the external glands secrete or produce the shell, while in reptiles and birds it is the glands in the oviduct which take on this shell-forming function, producing it rather for the egg than for the parent individual. We also know that calcareous formations are common in the human prostate as well as elsewhere. But it is not alone in those places where the epiblast and the hypoblast meet that such epidermal products are found. If skin and mucosa be really interconvertible, why should we not look for hair in the alimentary canal? And if we do, we are not disappointed, because at least in certain birds there is a curious pyloric plug—filter, as it were—composed of hair. Garrod has shed much light upon the frequency of hairs growing from the mucous membrane. (*Collected Works*, p. 334.)

It is often seen that those structures ordinarily regarded as dermal are not at all necessarily so. Thus, the thick part lining the bird's gizzard is composed of epidermal cells, while pigment occurs in the mouths of many animals and in the vaginae of many others. Calcareous deposits occur in the human prostate, in the oviducts of birds, reptiles, and monotremes, and upon the outside of many of the invertebrates. Hair is seen in the stomachs of certain birds, upon the eyes and in the mouths of many animals; mucous glands inside the alimentary canal of man, upon the skin of reptiles, fishes, and worms; sebaceous glands ordinarily upon the dermal covering, but as well in the nymphæ of the human female. In the South are met certain blue-gum negroes, so-called because of the excessive deposition of pigment about the gum and palate. Here, too, we have a reversionary or atavistic manifestation.

Thus, again, it will be seen that there is no one characteristic by which we can make a primary distinction between the skin and mucous membrane.

¹ There is at least a superstition—how well founded I cannot say—that the bite of a "blue-gum nigger" is peculiarly infectious. This I learn from gentlemen who have practised in the South.

Moreover, the old statement that the former is epiblastic and the latter hypoblastic will scarcely suffice, for certainly the conjunctival sac is a typical mucous surface, yet equally certainly it is derived from the epiblast, of which it occasionally shows some more active relic. The atavistic tendency is shown even further in the conversion that can be actually seen upon the surface of a long-extruded hemorrhoid, where the columnar epithelium of the hypoblast becomes metamorphosed into the scaly epithelium of the epiblast.

From all of which follows the corollary which Sutton has been quick to formulate, that a cyst lined with mucous membrane should be as readily admitted into the category of dermoids as one lined with skin, providing that either arise in situations where skin and mucous membrane do not ordinarily occur.

Let me next call your attention to the significance of polymastia, the so-called supernumerary and paramammary breasts, and to the allied topic of gynecomastia. Aristotle refers to the yield of milk from male goats, and Blumenbach described a case in which the animal had to be milked every other day for a year. Isidore St. Hilaire kept for many years in the Jardin des Plantes a large uddered he-goat that freely gave milk. It is well known also that among the Pomeranians, and certain other people as well, the male breast yields milk very often.

Laycock, some years ago, made a suggestion that mammary-gland tissue may make its appearance upon almost any part of the human body. It is known to occur also in ovarian dermoids, while the occurrence of supernumerary breasts in such situations as the perineum would corroborate this statement, as well as the view that the mammaræ are essentially nothing but specialized sebaceous glands that may be met, in normal or aberrant condition, in any portion of the skin. It is well known also that nipple-like processes are attached to the skin in many places, and that mammary tissue is found in locations unprovided with ducts. It is likely that this specialized tendency of sebaceous gland-tissue will account for the crops of furuncles which appear occasionally in the axillæ, especially in women, and most commonly about the menstrual period. This is certainly a manifestation of atavism, the atavistic side of it being shown by the abnormal presence of this tissue, while the furunculosis is, of course, to be explained entirely by accidental infection. In animals axillary mammaræ are most exceptional, but they are met with in the fruit-bats and in the flying lemur. Schultze finds that in multimastic animals the first mammary rudiment presents as a linear thickening of the epidermis, along a line nearer the dorsal than the ventral surface, in which at various spots lenticular thickenings occur, between which the connecting strands disappear, and from which

the individual glands are later developed. The domestic cow has normally four well-developed and often two rudimentary teats. The latter may be occasionally so well developed as to yield milk. Other anomalies met with in the cow are disproportion in size of those normally present, or the placing of one or several supernumerary teats always behind the normal ones. In sheep the supernumerary teats are always placed in front of the normal ones. It occurs occasionally in the human species that a supernumerary nipple is placed in or near the middle line, either upon the thorax or the abdomen. This must be regarded as a distinct reversion to the marsupial type, since in the marsupial pouch three nipples are scattered along this line. Williams has done a great service by calling attention especially to the trefoil arrangement of the mammary gland in the human female, and to the important clinical fact that this arrangement is often overlooked by operators, who fail to dissect out during operations for cancer the ultimate portions of this trefoil arrangement, in which later recurrence may consequently more easily occur. The trefoil arrangement is practically a tendency to return to the polymastia of earlier days, and may be regarded as an atavistic polymastia.

But, passing from this interesting topic to a few practical illustrations of the bearing of evolution upon pathology, I must remind you that we often lose sight of the fact that there are changes in the human organism not so very much less striking than those which convert the tadpole into the frog. Aside from those to which I have already called your attention, we see instances in the teeth, the thymus, the breast, the uterus, the skeleton, etc., most of which indicate the possibilities of tissues remaining unchanged for long periods, and then taking on new phases of growth by reversion to a state of embryonic activity. While in the ordinary course of organic evolution cells develop in regular and orderly manner in accordance with inherited tendencies, occasionally they arise at places where they have no business, or at inappropriate times, and then grow to an extent at variance with normal formation. In this way are produced embryonic monsters, and malformations as well as various neoplasms.

Wisdom-teeth are to be regarded as reversions to a form of ancestors having a jaw long enough to contain more teeth, at least five or six molars. The extra incisors which appear at the edges of the premaxillary bone in extreme cases of harelip are also atavistic in character.

The well-known characteristic of so-called Pott's fracture of the fibula has been shown to be largely due to the fact that this bone is a rapidly disappearing relic, which, in fact, in many of the lower animals has already completely disappeared. In the

human embryo at the third month the two bones of the leg are equal in size.

Of all the forms of club-foot, that known as equinovarus is the most common. It is the normal position of the foot in the embryo up to the seventh month, and in many of the quadrumana throughout their lives.

The acneal pustules which appear upon the face of adolescents at the period of puberty are, in effect, only atrophied hair-follicles or sebaceous glands endeavoring to produce the hirsute covering of our former ancestry.

It is of interest, also, to know that eczema is by no means confined to the human skin, but that it is one of the common heritages of nearly all living surface-tissues. Woods Hutchinson has shown that its oldest analogue is the exudation of gummy and resinous fluids upon the stems or leaves of plants and trees for the healing of wounds, and protection against fungi and entanglement of insect enemies. Quite analogous also is the outpour of protoplasm from the surface of an amœba, by which it encloses or attaches foreign bodies coming in contact with it. Among certain plants we find a disease which may be regarded as vegetable eczema, particularly in the so-called "apple-scab," which is caused by a distinct fungus (*fusicladium dendriticum*). In the course of this vegetable disease a distinct papular stage is seen, to be followed by an equally distinct horny stage, in which a layer of cork-like tissue is formed. Among tubers a similar disease known as the "potato-scab" is quite common. Among domestic animals mange in dogs, grease in horses, and foot-and-mouth disease in cattle are almost identical with eczema in the human subject, the irritant, however, being a parasite.

Moreover, as Hutchinson has shown, the preference which eczema seems to manifest for flexor surfaces, and especially flexures, is to be explained upon the principle that it is a dermatitis, and naturally occurs where skin is thinner and more delicate, while the irritating effect of perspiration, dust, heat, friction, etc., is more marked in these localities.

But all these facts to which I have called your attention to-night are more or less isolated instances from which great and important truths are yet to be deduced by those who have knowledge comprehensive enough to utilize them. Unfortunately, these men are as yet rare; and one remedy for this condition of affairs which I place before you as deserving of most careful consideration is the formation of a society in which should meet on common ground botanists, agriculturists, vegetable pathologists, biologists, zoölogists, veterinarians, and human pathologists, where all may exchange ideas, and where each may gain by contact with the others that which will add vastly to his own information

and usefulness. Take the case even of the veterinarians, who practise earnestly and zealously and more and more intelligently in a field which, as one might say, is topographically next to ours. How much they know which might be of value to us, and how much we know which they could apply to the greatest possible advantage in their own work, did they but share the knowledge. It seems to me that the formation of some such society for the interchange of knowledge would be of the greatest imaginable help in the direction indicated.

The other essential, as it seems to me, is a carefully prepared work upon comparative pathology, in which should be recorded, collated, and carefully edited the various facts known to the classes of students just enumerated. Such a work must necessarily be of composite character, since probably no man living knows enough in all these various branches to justify his attempting it as an individual task. Even the selection of an editor for such a work would be a difficult task, and would be a high compliment to the man chosen. In the preparation of a book should be enlisted men like Hertig, who writes most entertainingly of the diseases of trees, and men of his stamp, who concern themselves mainly with the vegetable world. Others, again, like Metschnikoff, who have had a training as zoölogists, but who have the deeper insight which permits of the application of their knowledge to the explanation of the problems of human pathology, should also be enlisted in this great cause. The ablest veterinarians of the world, and those who concern themselves with such problems, for instance, as are presented in this country to the Bureau of Animal Industry, should also contribute; and, finally, their labors and results should be carefully collated and arranged alongside of the facts presented in our ordinary works on general pathology, and this last by an ideal editor, who should combine vast stores of general information with the knowledge of that which would enable this storehouse of facts to be made available and applicable in the recognition and treatment of diseases in the human race. Thus, even the agricultural chemist, the botanist, and the naturalist might combine to produce a work whose value should so far exceed that of any single work now before our profession, as do our present books those published a hundred years ago upon the same subject.

This, then, is my plea to you in closing, that men in various branches of scientific work should get together and make common stock of their knowledge, and that the results of their investigations be presented to the scientific world in some such way as that indicated. There exist to-day no works in any language on comparative pathology. The ideal work to which my longing points would require

two, three, or even more volumes,¹ and should be epitomized in condensed form, which could be placed in the hands of every second-year student, and upon which he should be fed, as it were, from the beginning of his second year until after his graduation, when the larger one should be in his hands until he has familiarized himself with its contents. When this happy condition of affairs is brought about, we shall have men in our profession who are liberally educated, shining in the light of a knowledge which, after all, would be focussed upon the problems of disease in man; and, then, and I fear not until then, can medicine claim the title and privilege of being really liberal.

There are great truths that pitch their shining tents
Outside our walls, and though but dimly seen
In the gray dawn, they will be manifest
When the light widens into perfect day.

LONGFELLOW (*Michael Angelo*).

**IN WHAT MANNER CAN ULCERATIONS OF THE
NASAL SEPTUM FOLLOWING OPERATION
AND IN ATROPHIC RHINITIS BE
HEALED TO SECURE AN EVEN
AND MOIST SURFACE?**²

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THE consideration of such a topic as this may, to the casual observer, seem unimportant. At first thought it would appear sufficient to be able to heal ulcerations on the nasal partition in any manner, but we all know how important it is to repair nasal ulcerations and obtain a cicatricial surface which will not accumulate secretions. Retained nasal secretions upon the septum, besides being a cause of obstruction and general annoyance, eventually lead to secondary ulceration.

This paper will necessarily be short, since the treatment which will be advocated is very simple and can be quickly stated. We may, for convenience, classify ulcerations of the nasal septum into two large divisions—first, those resulting from operations, and, second, those appearing as a stage of some one of the several varieties of inflammation of the nasal passages. Perhaps it would be wise to exclude the ulcerative stages of syphilis, lupus, and tuberculosis, because the treatment of these is largely constitutional, although in these diseases ulcerations require careful local attention. First, let us speak of ulcerations on the nasal septum caused by operative procedure. It would be well to say at the outset that the more nearly normal

¹ A new work of promising character in this direction is announced by Lubarsch and Ostertag (*Allg. Path. und Path. Anat. des Menschen und der Thiere.*).

² Read before the Laryngological Section, New York Academy of Medicine, January 22, 1896.

from the standpoint of healthfulness the nasal passages are, the quicker will the nasal tissues recover after operation. But little need be said in regard to the healing of ulcerations on the *turbinate* side of the nose, for cleanliness, disinfection, and perhaps occasional stimulation will do all that is necessary in a healthy patient. Ulcerations on the septum produced by operations will heal much more quickly and with a much fresher cicatrix in moist hypertrophic conditions than in atrophic disorders. The difficulty lies chiefly in the treatment of ulcerations where the septum is dry, atrophied, and presents more or less irregularity of surface. We note, too, a difference in the behavior of ulcerations following the different methods which are employed to reduce the thickness of the nasal septum. It has long seemed to me that the use of the galvano-cautery upon the nasal partition should not be encouraged. I am not in the habit of using it except over very limited surfaces, as, for instance, upon a small projection of cartilage, too small to require the use of saw or trephine. We occasionally find, too, an oedematous, boggy condition of the soft tissues of the septum where a very limited application of the galvano-cautery may be employed instead of the mineral acids. The use of the galvano-cautery over an extensive surface, to remove deviations of the septum or ecchondroses, as a whole, should be deprecated, because it seems to reduce the vitality of the septum very much, and ulcerations so produced are difficult to heal in a way to secure a moist cicatrix. Tissues are removed much more scientifically by some method of excision. We may be excused for briefly mentioning what we believe to be the best way of treating ulcerations after operation to avoid sepsis. We believe that it will be found very rarely necessary to introduce any plug or tampon in the nostrils to arrest hemorrhage. Bleeding almost always ceases spontaneously. I make it my routine practice to have the patient blow the nose very thoroughly after the bleeding has nearly stopped, in order to remove any small pieces of tissue or any foreign body, and then cover the wound with boric acid and compound stearate of zinc. It is not well to wash out the nostrils by post-nasal irrigation until the second or possibly the third day after the cutting. In my experience danger of sepsis is usually past by that time.

Now as to the best method of treating operative ulcerations during the first week. I believe there may be honest differences of opinion entertained. I instruct patients to return the second or third day after operation, but occasionally, when they have not called for a week or ten days, I have been surprised to see how well the wound has progressed in healing, and sometimes without even antiseptic washing. I know that the behavior of the wound depends largely upon the general condition

of the nose. Such wounds would not progress favorably without proper cleansing in atrophic cases. In such conditions we cannot do less than employ post-nasal irrigation and general oiling of the surfaces, but in comparatively healthy nostrils it is a question whether wounds upon the nasal septum do not progress as favorably if left untouched for at least ten days. Cicatrization necessarily takes place beneath the protection of the scab and the overlying secretions which catch upon it. If we could wash off all dirt and dust and overlying secretions and leave the thin scab alone over the ulceration, probably the best course would be followed; but this is a difficult thing to do, and the constant rubbing off of the scab, and the uncovering of the wound produce an irritable ulcer, which repairs itself with tissue further removed from a healthy structure than when the ulcerations are left untreated or washed in the simplest manner. If we could treat ulcerations on the nasal septum as we do those on the surface of the body, by the protection of antiseptic coverings, we should probably secure a moist, even surface not unlike the surrounding healthy mucous membrane; but in the nose it is impossible.

Different methods must necessarily be employed to fill in an excavated ulceration and bring it flush with the surrounding surface. I believe the tendency of a nasal ulceration to deepen until in some cases there seems to be danger of perforation occurs more frequently after the use of the galvano-cautery than following excision. I presume we all see ulcerations on the nasal septum after operation which need to be treated diligently in order to prevent perforation. Daily application of such stimulants as nitrate of silver, zinc, balsam Peru, or the use of such powders as aristol and iodol will be found necessary to force the ulcerated surface to granulate. On the other hand, we sometimes, in a narrow nostril, where we are anxious to obtain all the breathing-space possible, are annoyed by the tendency toward overgranulation, and it becomes necessary to excise granulation-tissue many times before we can secure an even surface.

But the greatest difficulty is not so much in making the surface even as it is in obtaining a cicatrix which is smooth, and, more important still, one which is moist. If we cannot secure this, the benefit derived from the operation which we have undertaken is compromised, and the patient does not obtain the relief which we have promised or which he expected.

I have said before that the difficulty of obtaining a moist cicatrix is greater where the galvano-cautery is used, and I also think that the application of the mineral astringents to ulcerations tends to produce a thicker and dryer cicatrix. I believe that apart from cleansing, ulcerations should be handled as little as possible until the surfaces are even with the

adjacent tissues, and then much can be accomplished by the employment of friction with certain mild disinfectants, in removing the granular surface that is left after the healing of an ulcer, and in making it hard, slippery, and moist.

Now let us speak of the ulcerations occurring in atrophic rhinitis. We meet with all stages of this disease, and perhaps a day does not pass that we do not see numbers of small ulcerations on the cartilaginous septum in children and adults who are suffering from atrophic nasal disorder. These are the patients who are annoyed by the retention of scabby secretions upon the nasal septum and oft-repeated nose-bleeds. Antiseptic irrigation with Seiler's solution or with some stronger disinfectant, and oiling, need to be employed. Great improvement can be secured by these simple measures, but to heal the many small ulcerations and obtain an even, moist surface, more needs to be done. We commonly find the collection of dried secretions just in front of some prominence on the septum, or in the large convexity of a deviated septum. It is superfluous to say that the proper methods should be employed to reduce large prominences and to correct the deep concavities of a nasal partition bent upon itself. It is important even to level down small prominences on the cartilaginous septum in order to prevent the retention of secretions in front of them, even when it is not necessary to obtain greater breathing-space. For many years I was in the habit of coaxing these small ulcerations to heal by the application of the so-called stimulants—nitrate of silver, perhaps, being used more than any other. We know that it is even advocated that, in case an ulceration on the septum refuses to heal, it should be burned by the galvano-cautery, in order to change the character of the inflammation. I do not find, however, that such treatment secures in the cicatrix anything but more or less irregular, granular, and dried surfaces, upon which the secretions collect and become dried crusts.

A good while ago, and I believe at first it was in those cases of epistaxis occurring in young adults, who had small ulcerations upon the cartilaginous nasal septum, with a general unevenness of the surface, the entire nasal passage being in a state of beginning atrophic rhinitis—I found that I obtained better results by *rubbing the ulcerations thoroughly* than by the coaxing treatment of stimulants. I was in the habit of introducing a cotton-carrier, and with a small hard pledget of cotton moistened with listerine I rubbed the several ulcerations rather forcibly and for a few seconds at a time. This at first produced bleeding from the superficial ulcerations, but continuing with the rubbing the bleeding was stopped, and not only the ulceration itself, but the adjacent tissues seemed to take on a healthier condition, which resulted in quick healing. I

think latterly I have used borolyptol more than anything else, and with better results, and I am in the habit, so soon as the ulcerations following operative work become even with the surrounding tissues, of, we might say, polishing the surface by antiseptic friction applied every two or three days for two or three weeks. The result has been to secure a whiter cicatrix, and one which is smooth and much more moist than the surface of the usual cicatrix. In atrophic rhinitis small prominences of the septum can be rubbed down in this way alone, and I am certain that superficial bloodvessels which easily and continually bleed can be destroyed in this manner, and the small ulcerations healed with an even, moist surface.

I am not positive that it is necessary to use any special medicament, but believe the best are those represented by such cleansing medicines as listerine and borolyptol. *The friction with moist cotton is the important part of the treatment.* I have found, too, that by this procedure it is possible to exhaust certain forms of nervous irritability of the nostrils. I have employed it lately in a case of nasal hydrorrhea occurring in a nervous woman, who was very much annoyed by constant fits of sneezing and copious transudation of watery fluids from the nose. Friction on the nasal septum was at first unpleasant, and provoked sneezing and stoppage of the nose; but after it had been continued for a week the nostrils became much more tolerant, and the discharges were very much diminished. I believe it to be possible to destroy the over-sensitiveness of peripheral nervous filaments in this way, and to control many of the annoying vasomotor disturbances which are frequently seen in the nostrils.

The points which I would advance, then, are the following:

1. That ulcerations on the nasal septum produced by operative work repair themselves promptly and with an even, moist cicatrix, just in proportion to the degree of general healthfulness of the nasal mucous membrane which exists; much better in hypertrophic than in atrophic conditions.
2. Ulcerations produced by the galvano-cautery do not heal in so favorable a manner as those caused by excision.
3. In healthy nostrils little beyond antiseptic irrigation should be done in the treatment of operative ulcerations until they are even with the surrounding tissues; then the surface should be rubbed forcibly with an appropriate antiseptic stimulant, such as borolyptol or listerine, until the surface of the cicatrix is smooth and moist.
4. This same frictional treatment should be used to heal the multiple small ulcerations in atrophic rhinitis, and to level and make moist the cartilaginous surface, and so prevent the accumulation of dried secretions.

5. Extreme irritability of the nasal passages, as evinced by paroxysms of sneezing, frequent spasmodic closure of one or both nostrils, abundant transudation of watery fluids, etc., can often be relieved by rubbing the septum and anterior turbinated in the manner described.

CLINICAL MEMORANDA.

NERVE-GRAFTING OR TRANSPLANTATION FOR PARALYSIS RESULTING FROM INJURY TO THE MUSCULO-SPIRAL.¹

BY CAPTAIN A. E. BRADLEY, M.D.,

ASSISTANT SURGEON U. S. ARMY; FORT YELLOWSTONE, WYOMING.

I. W., private, Troop "B," Tenth Cavalry, stationed at Fort Custer, Montana, by a fall from his horse on April 11, 1895, fractured his right humerus at about the junction of the upper and middle thirds.

The case was seen by the writer a few days after the injury was sustained, through the courtesy of Captain Egan, at that time post surgeon at the post. The fracture was oblique, involving probably about two and one-half inches of the shaft, extending from without, downward, inward, and forward. It was complicated from the first by paralysis of the extensors of the forearm, the characteristic "wrist-drop" of musculo-spiral paralysis. Loss of function of the group of muscles supplied by this nerve seemed complete. The fracture healed promptly under appropriate dressings, with good union, no deformity, and little or no shortening.

The paralysis persisted, and up to the time the case came under my care, about May 20th, had not improved with massage and battery treatment.

At this time the muscles of the whole arm were atrophied from disuse; muscular excitability of the forearm-extensor group could be elicited by percussion and a slowly interrupted galvanic current. Until operation these muscles were given electrical stimulation three or four times weekly, with no perceptible improvement.

After much difficulty in gaining the consent of the patient, operation was performed June 22, 1895, with the assistance of Assistant Surgeon Kennedy, U. S. Army.

A medium-sized dog was secured, and under anesthesia his sciatic nerve was antiseptically isolated and left in situ surrounded by warm sterilized gauze; the operation was then begun by a three-inch incision over the depression between the biceps and triceps muscles, and the nerve found with no difficulty in the musculo-spiral groove. It had been thought that rupture had been complete; but the nerve was continuous, having at the seat of injury a hard nodular enlargement apparently involving the whole trunk, about one centimetre in diameter and two centimetres in length. This, and the nerve itself on either side for some distance, were intimately adherent to the callus, and dissected loose only with much difficulty; the line of fracture corresponded to the nodule.

After mature deliberation it seemed advisable to remove the tumor, which was done, provisional sutures

being first introduced, so as easily to control the two ends for further manipulation. Efforts were then made to bring the ends into approximation by stretching, but the space was too great; about three centimetres had been removed, and the retraction of the two ends about doubled this distance.

A section of the previously prepared nerve of the dog, five centimetres in length, was carefully sutured in place with fine catgut, there being no traction on the sutures when the approximation was completed. The wound was then closed and dressed. Modern surgical methods were strictly observed throughout.

The recovery from operation was perfect; union took place by first intention; there was no pain, no fever, nothing abnormal.

During the next four weeks he received faradic treatment to the muscles involved three or four times a week. Because of changes of station he passed from observation late in July. Recent information from Major Shannon, Surgeon U. S. Army, who relieved the writer at Fort Custer, states that there being no improvement observed, he was finally discharged from the service for disability.

The time between operation and discharge was too short to decide fairly as to whether or not function would have been ultimately restored, and the operation physiologically successful. The writer thought that sensation was returning before four weeks had elapsed, and believed that the prognosis was favorable.

It is to be regretted that the case could not have been kept under observation for five or six months at least.

The section removed was examined by Major Reed, Surgeon U. S. Army, Curator of the Army Medical Museum, and he has kindly made the following report:

"Referring to my letter of July 15th, concerning the tumor of musculo-spiral nerve removed from a soldier, I beg to submit a further report of the microscopical examination.

"Its general structure is that of a soft fibroma, moderately rich in cells. In the middle part of the section there are seen cross-sections of four nerve-bundles. Within the bundles no nerve-fibrils are to be made out, their place being taken by a connective tissue fairly rich in cells.

"At one margin of the section there are seen cross-sections of five other small nerve-bundles. While in two of these bundles no cross-sections of nerve-fibrils are to be made out, in the other three one can still see, here and there, fibrils with normal-staining axis-cylinders; in other words, the section shows a marked hypertrophy of both the perineum and endoneurium of the nerve-bundles, and hence the tumor might properly be designated as a traumatic fibro-neuroma."

Efforts to find the patient so as to procure a later report have been unavailing.

The subject of nerve-suturing, etc., has been carefully gone over by Dr. Willard, of Philadelphia, in an excellent paper appearing in *THE MEDICAL NEWS*, October 6, 1894.

He mentions several cases of nerve-grafting with varying results; his conclusions, however, are that when the loss of nerve-substance is large nerve-grafting will usually give better results than the splice-operation of splitting and turning the nerve-flaps into the gap.

¹ Published by authority of the Surgeon-General U. S. Army.

REPORT OF A CASE OF ŒDEMA OF THE GLOTTIS, FOLLOWING SCARLET FEVER.

By JOHN GRAHAM, M.D.,
OF PHILADELPHIA.

CASES of œdema of the glottis, especially in children, are sufficiently rare to justify me in reporting the following case:

On November 4th I was called to see Annie H., and found her suffering from an attack of scarlet fever of moderate severity. She was put to bed, her diet regulated, and bowels kept open daily. Her throat, which was red and swollen, but free from false membrane, was sprayed with an atomizer containing Dobell's solution.

On November 10th she was convalescent, and I ceased my visits, giving the usual directions in regard to diet, avoidance of exposure, and pointing out the chief symptoms that indicate the coming on of albuminuria.

On the night of December 1st, three weeks after my last visit, I was called in haste, and found the child suffering from marked dyspnoea. She was sitting up in bed, making long, but not loud, sounding inspirations. There was marked supra- and infra-clavicular retractions with each inspiration. There was no cyanosis, but the child looked pale and anxious.

The lungs gave forth a clear sound on percussion, and there was an almost total loss of vesicular murmur, but no râles. There was not, and had not been, any croupy or loud cough.

The mother informed me that our patient had been taken suddenly ill, with difficult breathing, a few hours before my arrival; that up to that time she had continued to improve since my last visit, excepting that for one week past she had lost her voice, and could speak only in a whisper; and that for the past twenty-four hours the child had passed only a few drops of urine. The mother had fortunately saved the small amount voided, and on testing it with heat and nitric acid it showed a large amount of albumin present. The patient's temperature was 99°. There was no dropsy of the face, feet, or legs.

By a poor light, and using a spoon for a tongue-depressor, I examined the throat, with negative results. There was no false membrane in sight. I could see the tip of the epiglottis, but could not see the glottis. I saw no swelling or redness. I did not attempt to examine the glottis with my finger to find if it were swollen, because such an examination would have increased the dyspnoea. I had no mouth-gag to protect me from the child's teeth, and only an expert can derive positive information from such touch; but lastly, and for the most important reason, the absence of such swelling would be only negative evidence, for so-called œdema of the glottis in most cases is really œdema of the larynx, and there may be but little swelling of the glottis.

My diagnosis at the time was probable œdema of the glottis, and the subsequent history of the case, I think, clearly proved it correct.

I explained to the mother that her child was suffering from a disease similar to membranous croup, and that, to give time for our medicines to act, it might be necessary to perform tracheotomy to save the child from smothering.

I ordered pulv. jalapæ com. ʒj to be given to the child in divided doses, the entire amount to be taken inside

of one hour; tincture of digitalis, 5 drops every three hours; and a mixture containing 2 grains of carbonate of ammonium and 10 m. of syr. senegæ every two hours. The diet to consist of milk, in as large quantities as the child could take without producing vomiting, and to use whiskey in the milk should symptoms of exhaustion come on.

This treatment was followed in six or eight hours by copious watery evacuations from the bowels and a free action of the kidneys, and coincident with these discharges the dyspnoea began to abate, and our patient steadily improved until December 7th, when the albumin had entirely disappeared from the urine.

With the disappearance of the albuminuria the child's voice returned clear and strong, showing that this symptom, which had existed for one week before my first visit, had been probably caused by œdema.

No false membrane was ever seen in the throat or expectorated.

From the time dyspnoea abated, and for one week after, the child expectorated, with slight cough, a quantity of thin, watery mucus, streaked with blood, averaging a teaspoonful at each expectoration. She complained of no pain in the throat, and there were no mucous râles in the lungs at any time during the illness.

To recapitulate the symptoms on which I based my diagnosis—

1. A cause for the œdema—albuminuria.
2. The absence of false membrane at the beginning and throughout the attack.
3. No croupy or metallic cough, and almost normal temperature—never above 99°.
4. Dyspnoea on inspiration, and not noticeable on expiration. True croup shows dyspnoea on inspiration and expiration.
5. The result of treatment.
6. The characteristic expectoration following the abatement of the dyspnoea.

MEDICAL PROGRESS.

Hysterical Hemianopsia in a Case of Epilepsy after Trephining.—At the recent Congress of French Alienists and Neurologists, LANNONIS (*Mercredi Médical*, 1895, No. 52, p. 615) reported the case of a man who developed attacks of focal epilepsy after trephining for the removal of fragments of bone broken by a blow upon the right side of the head by a leaden cane. After a series of convulsive attacks the man presented hemianopsia, with profound anaesthesia and loss of the muscular sense upon the left side. After a time the anaesthesia became segmental and disappeared suddenly in the course of an electrical séance, the hemianopsia being at the same time replaced by a narrowing of the visual fields.

Syphilitic Pneumonia.—At a meeting of the Moscow Dermatological Society, POSPELOW and KONTRIM (*Monatsh. für prakt. Dermatologie*, 1895, No. 12, p. 644) each reported two cases of syphilitic pneumonia that yielded to treatment with mercurials. Hæmoptysis occurred in three of the cases, and fever with sweating was present in two. The lesion was localized to the apices. In one of the cases tubercle-bacilli were found in the sputum, and the process was believed to be tuberculous. Treat-

ment with mercurial inunctions and sulphur-baths, with a residence in Egypt, was followed by general improvement and disappearance of fever, cough, and expectoration. The patient had been well for three years at the time of the report. In this case it is believed that the tuberculous affection was implanted upon the syphilitic pneumonia, disappearing with the latter.

Two Primary Carcinomata in the Same Individual.—At a recent meeting of the Berlin Medical Society ISRAEL (*Berliner klinische Wochenschrift*, 1896, No. 2, p. 45) reported the case of a woman, fifty years old, who came under observation on account of gall-stones, for the relief of which the gall-bladder was incised and its walls attached to the abdominal wall and fifteen concretions evacuated. Death took place suddenly several days after the operation as a result of heart-failure, which upon post-mortem examination was found to be due to mitral stenosis. In the wall of the gall-bladder was found a large area of ulceration surrounded by thickening of the adjacent tissue. Microscopic examination disclosed the histologic structure of a cylinder-cell carcinoma in places scirrhous. The cystic duct contained a polyhedral stone of cholesterol. The head of the pancreas was further found to contain a cancrroid tumor as large as a hen's egg. The retroperitoneal glands presented secondary involvement of cylinder-cell character.

The Correction of Wandering Spleen by Splenopexy.—As the result of a study of the physiologic functions of the spleen in conjunction with an experimental investigation, SYKOFF (*Archiv für klinische Chirurgie*, Band li. Heft 3, p. 637) concludes that extirpation of the spleen under otherwise favorable conditions is only successfully possible when the remaining blood-forming organs are in a normal state. When local affections of the spleen exist resection is to be undertaken in preference to splenectomy. Splenectomy is indicated when the pathological alteration of the spleen is not secondary but primary, and capable of further extension throughout the organism; and when it cannot be hoped that the pathologically affected spleen (however slight the involvement may be) will perform its physiologic function. A wandering spleen should be fixed in position. For this purpose catgut-sutures will answer admirably. The organ thus attached diminishes in volume—an advantage if it be hypertrophied. In case of anterior displacement of the spleen an attempt should be made to return the organ to its proper place and fix it there.

Successful Cœliotomy in a Case of Obstinate Dysentery.—At a recent meeting of the Medical Society of Amsterdam STEPHAN (*Berliner klinische Wochenschrift*, 1896, No. 1, p. 21) presented a man, twenty-six years old, who, eight weeks before coming under observation, was seized with fever and looseness of the bowels, the intestinal evacuations containing blood and pus. The condition thus continued, the patient losing flesh and growing anæmic. There was some tenesmus, but the abdomen was only slightly distended. Upon palpation a painful band was appreciated in the left side of the lower portion of the abdomen. There was irregular slight elevation of temperature. In the diagnosis tuberculosis,

syphilis, and carcinoma were excluded and dysentery decided upon. The use of many different drugs directed to the treatment of the condition named last was untended with successful results. It was therefore finally determined to perform cœliotomy and establish an artificial anus. Through this opening local treatment by means of an emulsion of bismuth, with later tannic acid, and ultimately silver nitrate was instituted. Improvement soon set in, and in the course of a few months it became possible to close the artificial anus.

THERAPEUTIC NOTES.

In the Treatment of Frostbite, MONTMOLLIN (*Rev. Méd. de la Suisse Rom.*, 1895, No. 12) has employed successfully baths of the affected parts of from fifteen to thirty minutes' duration, four times daily, in a centesimal solution of tannic acid, together with baths twice daily for fifteen minutes in soap-water.

For Bronchitis in the Aged.—Take of

Benzoic acid 5 grains.
Tannic acid 2½ " —M.

Make into a cachet. Dose: Take four or five in the day.—MARAGLIANO, *Gaz. Hebdom. de Méd.*, etc., 1896, No. 1.

To Prevent Iodism from the use of potassium iodide, SPENCER (*Jahrb. f. prakt. Méd.*, 1895) employs the following formula:

Take of

Potassium iodide ʒj.
Iron and ammonium citrate ʒj.
Tincture of nux vomica ʒij.
Distilled water ʒij.
Compound tincture of cinchona to make ʒiv.—M.

Dose: A teaspoonful three times a day in water after meals.—*Monatsh. f. Derm.*, 1896, No. 1.

For Dry Pharyngitis.—

R.—Acid. carbolic. gr. iv.
Tinct. iodi m̄v.
Tinct. aloes m̄viij.
Tinct. opii gtt. x.
Glycerini ʒj.—M.

S.—Use as a spray several times daily.—DANET, *Progrès Médical*, No. 51.

The Treatment of Epilepsy with a Combination of Potassium Bromide, Adonis Vernalis, and Codein.—As the result of a rather extended clinical study of the utility of a combination of potassium bromide, adonis vernalis, and codein in the treatment of epilepsy, TATY (*Lyons Medical*, 1895, No. 12; 1896, Nos. 1, 2) arrived at the conclusion that the addition of codein is not an advantage, as to this must be attributed the resulting constipation and somnolence, while bromism is thus not avoided. The adonis acts as a stimulant to the heart and increases the flow of urine, although it does not prevent the hebetude or the attacks.

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THE TRANSFER OF THE MEDICAL NEWS.

THE management of THE MEDICAL NEWS has reason to be flattered with the discussion which has arisen over its transfer from Philadelphia to New York, and with the degree to which gentlemen, apparently not concerned in the subject, have taxed their ingenuity in inventing causes to account for it. The matter would seem to be so simple as to be self-evident. THE NEWS has never been a mere local journal. Large outlays and unremitting labor have been lavished on it to obtain and maintain for it a national and even cosmopolitan position. These efforts have been crowned with success. Wherever the English language is read THE NEWS is recognized as an organ of the profession at large and not of that of a single city or State. It has welcomed and has been favored with contributions from every part of the country and of the civilized world. Its subscription list is equally extensive, and of recent years it probably has had as many readers in New York as in Philadelphia. If Philadelphia has supported it generously with contributions and subscriptions, so have New York and Boston and Cincinnati and Chicago and all other centres of pro-

fessional activity, and it has sought to recognize this favor by payment to contributors, the only medical periodical, we believe, in the English language that makes it a rule to do so, with the exception of the *American Journal of the Medical Sciences*.

When, therefore, the increasing business of the publishers rendered it expedient for them to open a branch of their establishment in New York, in order that the authors, whose works they have the honor to publish, should have the benefit of the business facilities of both cities, it was natural that they should transfer one of their periodicals. The selection fell on THE NEWS, because, as partaking of the character of a medical newspaper, the concentration of activity in New York seemed to offer greater opportunities to it than to the *American Journal of the Medical Sciences*. Whether its office be in one city or the other, it will expect to receive, as heretofore, the support of the profession at large, and if, as its managers anticipate, the business advantages of New York shall enable it to acquire a wider sphere of influence, it will be able to offer to its readers an increased store of information, and to its contributors a larger opportunity of disseminating their views throughout the world.

THE DANGER OF SEPSIS IN ENDERMATIC INJECTION (INFILTRATION-ANÆSTHESIA).

THE growing popularity of infiltration-anæsthesia since its discovery in 1891 by Schleich, of Berlin, and subsequent introduction into Germany and America one and a half years ago, makes it necessary to sound a note of warning regarding its indiscriminate use without proper care as to the technique. The only substantial objection to this form of local anæsthesia that has been raised is that of the possibility of infection from septic fluids, unclean hands or instruments.

There are certainly many physicians who either do not clean their hypodermatic syringes, or simply wipe them off and then go to the next patient. It is not customary to make special preparation of the skin or of the hypodermatic needle for ordinary hypodermatic injection. Even the fluid in which to dissolve the morphine, the cocaine, or other tablet, is not always drawn from an aseptic source. Moreover, the small amount of serum which clings to the needle on withdrawal is certainly a culture-medium for the streptococcus, and becomes a fruitful source of inoculation for the succeeding patient.

It is remarkable that we see or hear but little of hypodermatic abscess, which, despite septic injection, must be an uncommon occurrence. We can only ascribe this to the fact that in hypodermatic injection the fluid is deposited in a comparatively compact depot under the skin. It therefore does not readily diffuse itself into the tissue, and thus permits of rapid phagocytosis.

Quite different is endermatic injection; for when fluid is slowly infiltrated into the tissues it distends the meshes, replacing the fluids and the blood entirely for a length of time (ten to twenty minutes). The infiltrating fluid is brought intimately into relation with the cellular elements, and phagocytosis does not obtain in time to counteract the effect of implantation of septic germs which can thus gain a foothold, and more certainly cause suppuration than in ordinary hypodermatic injection.

A case of sloughing has been brought to the writer's notice in which the Schleich method was used for anæsthesia in operation for mammary abscess. The infiltration-fluid was prepared by a local druggist; the infiltration was made by the physician with a hypodermatic syringe and needle used for ordinary medicinal injection. "Anæsthesia was complete, but operation was followed by sloughing of the whole surface of the skin injected."

Schleich does not report any such accident at his hands. Nor has Würdemann met with a single case of the kind in his practice, although he reports several hundred injections. Reports coming from other surgeons do not chronicle such immunity, which can only be the fault of the operator. Schleich has pointed out in his brochure and in his other writings that absolute sterilization of everything in connection with the procedure should obtain. Würdemann insists that to insure uniform success it is important to apply scrupulously the following rules: I. The ingredients of the solution should be made absolutely sterile. This may only be obtained by *boiling all the solutions for five minutes before each operation* (afterward cooling same). This factor is especially pertinent, as several leading American and European manufacturing chemists have infiltration-tablets on the market for extemporaneous preparation of the several fluids. The tablets themselves are presumably aseptic, but if fingered ever so slightly cannot remain pure. *Boiling the solutions after mixing does not interfere with their anæsthetic qualities.* II. The bottles containing the solutions and all receptacles for the fluid should

be previously boiled (or sterilized by heat), and not suffered to remain exposed to contaminating influences, not even the air, but should be covered after cooling.

It is even more necessary for instruments to be aseptic than for ordinary operations. Any good hypodermatic syringe and needle may be used, but should be previously prepared by immersion for at least one-half hour in a 5 per cent. carbolic solution, which may be removed before operation by washing in sterilized water. The finest and sharpest of needles are advisable. These may be sterilized by boiling in soda solution or by carbolic immersion.

The person preparing the solution as well as the surgeon should prepare his hands as carefully as if for an abdominal operation. The part to be operated upon should be made aseptic in the usual manner. Attention to detail is absolutely necessary for the success of healing as well as for anæsthesia.

This is such a valuable method of anæsthesia and is receiving such wide application in the hands of our best operators that for the benefit of those not familiar with the procedure we append the following bibliography:

- Schleich, A.*: 1. Verhandlungen der Berliner Medicinischen Gesellschaft, 1891. 2. Verhandlungen der Deutschen Gesellschaft für Chirurgie, 1892. 3. Berliner klinische Wochenschrift, 1892. 4. Schmerlose Operationen Monograph, Berlin, 1894.
Van Hook W.: 5. The Value of Infiltration-anæsthesia. THE MEDICAL NEWS, November 16, 1895.
Würdemann, H. V.: 6. "Explanation and Demonstration of the Infiltration (Schleich) Method of Anæsthesia. Journ. Amer. Med. Assoc., December 29, 1894. 7. "The Infiltration Method of Anæsthesia in Ophthalmic Practice." Journ. Amer. Med. Assoc., November 16, 1895.

THE STATE CARE ACT.

By the approval of the Mayor and the signature of the Governor the Act of the Legislature transferring the insane of the county of New York to the State, the "State Care Act," goes into full effect. All the dependent insane of all the counties will henceforth be supported by the State in the State Hospitals. This Act adds 7329 to the number of the insane in State care, making a grand total of upward of 20,000. The transference of the insane of this county to the care and support of the State will prove a great benefit to the taxpayers of this city. It will lighten the burdens of taxation to the extent of more than \$1,500,000 annually, but it remains to be seen how the people of the State will regard the heavy burden which

is imposed upon them by the Legislature. The State Comptroller estimates that the pauper insane will be a tax upon the State beginning with \$1,000,000 annually, and the cost will steadily increase as the number of these dependents increases. Of this fact, however, we are well assured, viz., the insane in the institutions of this city are to be greatly benefited by the change. The wretched and incompetent management of the asylums of New York had rendered them little else than institutions for the conversion of the acute into the chronic insane.

THE LIBRARY OF THE NEW YORK ACADEMY.

THE library of the Academy of Medicine of this city has become a permanent institution of which the citizens may well be proud. It has passed the period of random growth and is now enlarging on a well-constructed plan, which is destined to make it one of the most complete medical libraries of the world. As a working library for medical and surgical writers it is now scarcely inferior to the Surgeon-General's Library at Washington. The Council of the Academy has always shown a most commendable liberality in sustaining the library. But, like all libraries, its future growth and usefulness depend upon a permanent endowment fund, which shall enable its managers to meet every prospective emergency. An effort to meet this want is about to be made, largely through the influence of the President, Dr. Bryant, which we trust will be eminently successful. The committee of twenty-five, whose appointment was noticed in our previous issue, have already begun work.

ECHOES AND NEWS.

DR. JOHN H. HUBER, Coroner's physician, has sent in his resignation. There are already fifteen applications for the place with Coroner Hoerber.

THE will of the late Dr. Robert G. Remsen, as filed in the Surrogate's office, shows that Dr. Remsen left personal property valued at \$1,000,000 and real estate of the value of \$150,000.

THE mortality of the State of New York is a trifle higher for 1895 than in 1894. The rate is stated as 19 per 1000 of population. Typhoid fever and diphtheria claimed 1270 and 5000 victims, respectively.

THE Board of Managers of the new Manhattan State Hospital—the new name of the New York City Asylum—are soon to be appointed by Governor Morton. The new Board is to consist of seven members, two of whom shall be women.

Two butter-makers and the son of Allen Devereaux, whose tuberculous herd of dairy cows was recently destroyed, have contracted the disease. As all were large partakers of the diseased milk, there can be little doubt as to the source as well as the method of their infection.

ALTHOUGH there are several factories in the vicinity of New York devoted to the preparation of horse-meat for food, it is comfortable to be reassured by the chemist of the Board of Health that not an ounce of it is sold in this city unless it be in the shape of imported sausage. It is also stated by these authorities that the flesh of the horse is easily detected by the usual iodine-test for starch, which it contains in contradistinction from all other butchers' meat.

REPORT comes from the University of Michigan of the adoption of a rather novel procedure in the surgical clinic of Dr. Carrow. The case was that of a young man afflicted with a disease which caused the complete loss of sight in one eye. In order to prevent the contagion spreading to the well eye, a watch-crystal was inserted under the lid of the unaffected eye. No impurities can now enter from the outside, and the patient is able to see very well through his novel monocular.

THE tracheotomy-tube has found a new use in overcoming the insufficient breathing-capacity of race-horses. Since the great horse Ormond was condemned as a roarer, attention has been called to the prevalence of this malady among thoroughbreds, and resort has been had to tracheotomy with admirable results. The statement is made that at the recent Manchester races in England three of the four best steeplechasers carried silver tubes in their windpipes.

A CHICAGO ham containing a large consignment of trichina has escaped the vigilance of the export officers and found its way to Antwerp, Belgium, where it is doing much in a small way to disturb our peaceful international relations. At all events, this missive from our pork-proud city of the West will not serve to increase the mutual esteem of the two municipalities, and therefore even the most innocent-looking ham should not receive a passport without the microscopic inspection required by law.

THE success of Roentgen's method of photographing the deeper structures of opaque objects continues to excite the deepest interest. Like so many great discoveries, it needs only to be mentioned to be understood. Bullets and other foreign substances in the flesh and bones of patients have already been located successfully in innumerable instances. Perhaps the most interesting success thus far is that recorded in the news from Vienna, where Dr. Neusser showed the position of calcareous deposits in the bladder, liver, and kidneys of patients. Professor Trowbridge, of Harvard University, is also experimenting successfully with the method.

TESLA, the distinguished electrician, has directed his inventive genius into the medical field. He has produced a machine which he calls an oscillator, and its effect, briefly stated, is to produce a shaking up of the human system (thus following the idea of Charcot), thereby causing certain physical conditions and alterations of forces, which will give energy and force to parts

but partly used. He has also produced an artificial light which under certain conditions is powerful enough to penetrate the human body. Metzuer, of Vienna, claims to have discovered that by its use the bacilli of tuberculosis may be destroyed.

THE New York State Medical Society held a meeting of unusual interest last week. The following officers and committees for the ensuing year were elected: President, Dr. J. D. Spencer, Jefferson County; Vice-President, Dr. L. Duncan Bulkley, New York City; Secretary, Dr. F. C. Curtis, Albany; Treasurer, Dr. Charles E. Horton, Albany. Committee on Legislation, Drs. Walter Suito, Herkimer; M. J. Levi, New York City. Committee on Prize Essays, Drs. A. Jacobi, New York City; Henry Hunt, Albany. Delegates to the British Medical Association, Drs. Charles L. Dana, New York City; James P. Boyd, Albany; John P. Bigelow, Albany; M. Allen Starr, New York City.

The resolutions adopted at the above-mentioned meeting, recommending that a bill be prepared and presented to the Legislature to secure the placing of all private medical institutions for the treatment of cancer and other diseases under the care of the State Board of Health, is a long step toward the proper legal oversight and control of many retreats, concerning which the public at present know nothing, except what their proprietors voluminously set forth in almanacs and kindred literature. New York is afflicted with more than her share of these institutions, and they richly deserve State attention.

IMPURE ICE AND THE HEALTH COMMISSIONER.—Health Commissioner Munn, of Denver, is having trouble with the courts of his county. It seems that the bacteriologist of the city found a great number of bacteria in ice sold by a particular company, and accordingly the company was requested to stop the sale of such ice, and on their refusal to do so the persons composing the company were brought before the magistrate and fined. The company, however, still continued to carry on their business, and the commissioner ordered the business stopped.

The county court was appealed to by the company, and they succeeded in obtaining an order from the judge restraining the commissioner from interfering with its business, and also a judgment against him for the costs of the suit. They claimed that no complaint had been entered against them; that there was lack of evidence; that the measure was unjust, oppressive, illegal, and tyrannical; that the pretended ordinance under which the commissioner acted was unreasonable, unconstitutional, and in restraint of trade; that he exceeded his jurisdiction and abused the discretion lodged in him.

On the other hand, the commissioner claims that the ice was obtained from a filthy pond near the city, and was sold as pure lake ice; that the bacteriologist pronounced it unsafe for human consumption; that, according to an ordinance of the city, "The health commissioner may condemn, or cause to be destroyed, any fluid or substance intended for food or drink, whenever he is satisfied that its consumption might be dangerous to health." This, of course, gives the commissioner exceptional and absolute powers—the Board of Health of Philadelphia and other cities have similar authority—and yet it is essential to the health of a community that some

such constituted body should have the power to decide summarily in such questions. As the commissioner well states, this cannot be left to a court or jury, "they could not determine whether the ice was impure better than the experts selected by the city." And if the health boards cannot restrict an unsanitariously conducted business because it would be an interference with commerce, they might as well give up their office, since to prevent a milkman from selling impure milk or a manufacturer from allowing goods to be made in unclean sweat-shops is a restriction of trade. One might as well ask the chief of the fire department to obtain an order from the court before he be allowed to cut down trolley wires or break windows when a fire occurs.

It is necessary, of course, that the men who are given such absolute powers be chosen for their fitness and not because of political sympathy. Commissioner Munn, of Denver, Colorado, is in every way capable, and his appeal to the courts of the State will, no doubt, be successful, and they will sustain him in his efforts. The decision of this court will be awaited with much interest by the various municipal health boards and health commissioners, as it will more clearly define the power they are entitled to use.

DIGESTION IN PLANTS.—It is natural to have a pretty high opinion of anything that belongs to ourselves. While we have admitted for some time past that some very wonderful processes and things were to be found in the organization of the lower animals and plants, yet we have always had a feeling of conscious pride that the term "fearfully and wonderfully made" applied with special and unique appropriateness to the mechanism of our own bodies. Our complex and elaborate digestive system, for instance, is a case in point. It was a great blow to our *amour propre* to find that it was duplicated in every detail in the stomachs of our animal cousins, but we still clung to the facts that we had more kinds of digestive ferments than any other species, and that while we might deign to admit kinship with animals in this respect, we were still immeasurably superior to plants of any sort. We are just beginning to submit to the epithet "animal" as applied to ourselves without worse protest than a half-suppressed growl, but the mere suggestion of any vegetable affinity—"cabbage-head" or "pumpkin," for instance—will cause an instantaneous contraction of the *arrectores pilorum* over the whole length of our dorsal aspect.

But even this barrier behind which our pride has entrenched itself, must also go down. No less distinguished authorities than Prof. Marshall Ward and Pentland Smith have discovered a vigorous starch-digesting or diastatic process in the grains of the familiar maize and the tubers of the lowly potato. In both cases so soon as the bud or shoot begins to develop it secretes a ferment that attacks the starch of the mass and changes it into sugar for absorption by its growing cells. It is this conversion and rapid absorption of the starch that cause the familiar shrinking and shriveling of potatoes that have sprouted in the cellar. Thus it seems clear that we shall have to "acknowledge the corn"—as one of our relatives.

But worse is to follow. Not only can this wretched cereal do with ease what our salivary glands and pancreas strain themselves red in the face over, but it also

performs another feat that our elaborate human digestive apparatus is utterly incapable of, and that is, dissolve or "peptonize" cellulose or woody fiber. The starch needed by the shoot for conversion is enclosed in cells with firm walls of cellulose, and these must be eaten through before it can be acted upon by the diastatic ferment. Accordingly another ferment is secreted that dissolves cellulose as our pepsin does proteids.

Of the helplessness of our own ferment in the presence of cellulose we have all had personal and painful demonstration in the extraordinary vagaries indulged in by the festive cucumber and the frugal raw turnip when introduced into our unsuspecting and defenceless interior.

In fact, the peptonizing power of the vegetable ferment is so much greater than that of the animal that, as we see daily, the papayotin of the pineapple, the pawpaw, and other fruits are rapidly becoming commercial rivals of the porcine product.

Certain other plants display even more strikingly human characteristics in that they have actually become meat-eaters and meat-digesters. It has long been known that a large family of flowering plants of which the "Sundew" and "Venus Fly-trap" are familiar examples, secrete upon the surfaces of their leaves a thick, sticky juice, which in the former simply entangles insects, and the latter attracts and holds them till they can be actually seized by the halves of the leaf closing upon them trap-fashion. Whether these were utilized in the nutrition of the plant was, however, an open question until quite recently, when a series of analyses of this viscid secretion was made, and it was found to contain both a peptic ferment and an acid, which together rapidly dissolved all the soft tissues of the insects, leaving only the wings and hard cuticular casing of the body and limbs. And what makes the resemblance to our own gastric processes most striking is that neither the acid nor the ferment is present in any quantity in the resting condition of the leaf, but both are poured out as soon as nitrogenous matter is placed upon the surface.

Truly our pedigree is of wonderful length, and we must regard ourselves not only as "magnificent animals," but as superb vegetables. If our physiologic processes are so strikingly similar, what a flood of light may vegetable pathology be expected to throw upon our disease-processes!

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninetieth Annual Meeting, Held in Albany, January 28, 29, and 30, 1896.

(Concluded from page 139).

ROSSELL PARK, M.D., of Buffalo, President, in the chair.

FIRST DAY—JANUARY 28TH (EVENING SESSION).

DR. GRACE PECKAM-MURRAY, of New York, in a paper on

TETANOID HYSTERIA,

said that by tetany she understood a disorder characterized by spasms of an intermittent character, which

during the intermissions could be produced by pressure over a principal nerve-trunk or bloodvessel of a part. She then reported three cases typical of the three varieties given by Trousseau—the benign, the medium, and the severe. In those rare cases in which there was a fatal termination this was due to spasm of the diaphragm and other respiratory muscles.

DR. NATHAN JACOBSON, of Syracuse, read a most interesting and timely paper, which will appear in our next issue, on the

TREATMENT OF MALIGNANT DISEASE IN SO-CALLED CANCER-INSTITUTIONS,

and called forth the resolution of the Society asking for State inspection and supervision.

DRS. L. D. BULKLEY, F. W. SHAFFER, and others said that from what they had learned from experience they could heartily indorse the statements contained in this paper.

DR. H. R. HOPKINS, of Buffalo, made some remarks on

ALCOHOLISM AND PUBLIC HEALTH,

in which he scored the recent bill providing for the compulsory teaching of the children in the public schools regarding the effects of alcoholics and narcotics, and dwelt particularly on the fact that the same body of persons that had secured the passage of this pernicious bill had also succeeded in securing similar legislation in forty States.

DR. A. W. SUITER, of Herkimer, introduced a resolution, which was adopted, to the effect that the Committee on Legislation be instructed to use all honorable effort to bring about a repeal of or an essential modification of this law.

DR. J. H. HUNT, of Brooklyn, with the aid of lantern-slides, delivered an address on

THE EVOLUTION OF PATHOLOGY,

and showed portraits of many of the great men of past ages who had contributed to this branch of medical science.

SECOND DAY—JANUARY 29TH.

In executive session, among other resolutions approving of certain recommendations in the President's inaugural address, was one regarding the relation of the Society to the American Medical Association. In adopting this resolution it was stated that the Society was ready to co-operate in any plan compatible with the dignity of both organizations, whereby the interests of professional harmony and the liberal spirit of the age would be advanced.

The following resolution was also adopted: That the Committee on Legislation be directed to secure the passage of a bill by the Legislature whereby "cancer-institutions" should be placed under the care of the State Board of Health in the same manner as private institutions for the care of the insane are under the care of the State Commission in Lunacy.

DR. W. E. FORD, of Utica, read a paper on

VAGINAL HYSTERECTOMY BY CLAMPS.

He said that hysterectomy was certainly not an elective operation for suppurative disease of the tubes and ovaries in most instances. Vaginal hysterectomy had

been done with clamps years ago and abandoned for ligatures, but Jacobson, of Brussels, had claimed, and substantiated this claim with statistics, that with properly constructed instruments the vaginal operation with clamps was the safer one. The disadvantages were that the presence of clamps in the vagina was a source of discomfort to the patient, and there was danger of too free oozing of blood. This second objection might be partially, at least, overcome by using instead of gauze-packing the cylindrical pledgets used abroad. The chief feature of Jacobson's operation appeared to the author to be the skilful use of the peculiar forceps and scissors. Recovery was much more rapid after the vaginal operation.

DR. A. VANDER VEER, of Albany, read a paper, entitled

COMPLICATIONS IN ABDOMINAL SURGERY REQUIRING
INTESTINAL ANASTOMOSIS, AND THE BEST METHOD
OF DOING THE OPERATION.

He reported three cases as illustrative of the type of emergency-cases often met with, and of the need in such of rapid surgical as well as efficient surgical methods. It was in just this class of cases that the Murphy button was especially useful, notwithstanding that there were certain real dangers associated with the use of this method, such as the retention of the button. For incised wounds of the intestine, and for gunshot-wounds of the bowel, if of small calibre, the Lembert suture or some other method of intestinal suture without mechanical device was appropriate. Of all the methods of intestinal suture that had been proposed, he thought Maunsell's method was the one most likely to be generally adopted.

DR. D. MANN, of Buffalo, read a paper on

SLOUGHING OF UTERINE FIBROIDS AFTER ABORTION
AND LABOR.

He said that under the stimulus of pregnancy fibroids previously of slow growth often became formidable complications. In a series of 597 cases, in which no treatment had been adopted for this complication, death had occurred in 220 cases. Owing to the distortion of the uterine canal, there is always great danger of sepsis.

DR. H. J. GARRIGUES, of New York, read a paper on

THE TECHNIQUE OF THE IMPROVED CÆSAREAN
SECTION,

he recommending doing the operation, if possible, just before the expected time of labor, and having present four assistants. After attending to the usual precautions regarding the cleansing of the patient, the instruments, and the hands of those engaged in the operation, an incision was to be made in the median line half above and half below the umbilicus. After turning out the uterus and closing the upper part of the incision, a rubber constrictor is to be loosely applied around the cervix and broad ligaments and crossed. After properly guarding the abdominal cavity from contamination, the constrictor is tightened, the uterus incised in the upper part for four or five inches, and an effort made to deliver the head of the child before the uterus has contracted in front of it. The cord is tied and cut, and if the placenta remains adherent after the uterine sutures have been inserted, it is to be peeled off with the mem-

branes. In suturing, it is better to keep the peritoneum outside of the muscular layer. The interior of the uterus is cleansed by wiping, and the elastic ligature very gradually loosened. All oozing having ceased, the uterus is returned to the abdomen and an antiseptic dressing and bandage applied. The bowels are moved on the third day.

DR. W. GILL WYLIE, in opening the general discussion on the foregoing papers, spoke of the abdominal *versus* the vaginal operation. He said he would rather have 10 per cent. of ventral herniæ and have 25 per cent. remain in bed for many weeks than have an increase of even 1 per cent. in the death-rate, and for that reason he had preferred the abdominal operation. He had, it was true, employed the vaginal route in 105 cases, but the good results he was inclined to attribute to these cases having been selected. He did not favor morcellation in the removal by the vagina of uterine fibromata.

DR. HERMAN J. BOLDT, of New York, said that where the uterus was situated high and was quite firmly fixed ligatures could not be used, but where the uterus was movable and there was but little inflammation in the adnexa the ligature-operation was suitable. It was not at all necessary to leave the clamps on longer than twenty-four hours. Total extirpation of the pelvic organs should be resorted to only where there were recurrent pelvic inflammations or suppurative processes.

DR. M. D. MANN, in referring to intestinal operations, said that as the element of time had not seemed to him to be so important as Dr. Vander Veer would have us believe, he had preferred the intestinal suture to the use of the Murphy button. In suturing he had found that time could be saved by taking four stitches of continuous suture, then interrupting it, and tying. He had become deeply impressed with the great value and importance of the vaginal operation, but the danger of intestinal fistulæ with this operation fully offsets the liability of ventral hernia following abdominal section.

DR. W. G. MACDONALD, of Albany, said that he preferred to pass a hook around the broad ligament and pull it down. This gave the forceps good control of the ligament. He objected to a multiplicity of clamps in the field of operation, nor was it necessary by this method of operating.

DR. A. H. GOELET thought the popularity of vaginal hysterectomy depended chiefly on its novelty, and in support of this assertion enumerated a number of the disadvantages of the vaginal method. He admitted, however, that it had a limited field of usefulness.

DR. J. RIDDLE GOFFE, of New York, in discussing Dr. Ford's paper, said that he had been greatly interested in the vaginal method of operating. He believed that in cases of bilateral disease in the pelvis, if the ovaries and tubes were hopelessly diseased, the uterus was no longer of use, and would be better out of the way. This additional procedure, he found, did not increase the mortality, and the operation was made much easier. He had met with two cases recently in which the appendages had been removed through Douglas's pouch, and the uterus left behind. They had come to him shortly after operation with symptoms of infection, and examination had shown the uterus to be full of pus. The original focus of disease had evidently been in the uterus

in these cases. The matter of using clamps or ligatures seemed to him largely a matter of individual preference.

DR. A. T. BRISTOW said that in many cases, as in the one of strangulated hernia described in Dr. Vander Veer's paper, the element of time was extremely important; hence the use of some mechanical device appeared to him essential. All the methods of intestinal suture were slow, and required much expertness.

DR. B. FARQUHAR CURTIS, of New York, favored suture where the case was not extremely urgent, but where rapidity of operating was an essential, the Murphy button was better. It was objectionable in cases of gastro-enterostomy on account of the liability of the button falling into the viscus.

DR. WILLY MYER, of New York, read a paper on

EARLY DIAGNOSIS OF TUBERCULAR KIDNEY.

This will appear in a subsequent issue of THE MEDICAL NEWS.

DR. REYNOLD W. WILCOX, of New York, read a paper entitled

THE SYMPTOMS AND DIAGNOSIS OF THE INDIGESTION OF STARCHY FOODS,

which will also appear in a subsequent issue.

DR. BULKLEY, in discussing this paper, emphasized the importance of proper mastication, and of the avoidance of imbibing fluids along with the food.

DR. T. HALSTED MYERS, of New York, read a paper on

CONGENITAL DISLOCATION OF THE HIP,

and exhibited a patient upon whom he had successfully operated. He said that the Lorenz operation was safe if the operator was sufficiently skilful and employed thorough asepsis, and that even when it failed to cure it left the bone in a position of greater stability, and hence the usefulness of the limb would be improved. The little girl upon whom he had successfully operated was four and a half years of age, and had been delivered after a difficult labor. Nothing abnormal had been noticed until she began to walk. Last February the shortening was found to be one and a half inches, and she presented all the symptoms of congenital dislocation of the hip. Under ether, the dislocation was forcibly reduced and the limb put up in plaster-of-Paris spica, with the limb abducted about thirty degrees. Last July the present splint had been applied. It exerted pressure against the trochanter and held the limb abducted. Motion at the hip, knee, and ankle was allowed. The shortening was now about one-fourth of an inch; there was no telescoping and no pain. This apparatus would be worn by the child for another year.

DR. EDWARD D. FISHER, of New York, read the opening paper on a

DISCUSSION OF THE PRESENT STATUS OF THE SURGERY OF THE BRAIN.

He said that the indications for operation were: (1) traumatism; (2) localized epilepsy; (3) athetosis; (4) tumors; (5) abscess; (6) cerebral hemorrhage; and (7) microcephalus. In cases of epilepsy he favored the bone-flap operation; in tumor, he preferred the removal of the bone with trephine and rongeur. He had been unable, even after careful observation, to detect any shock due to the concussion produced by operating with mallet and

chisel. Many of these cases were so miserable, and without hope, that even though such operations were only occasionally successful, they would be justifiable.

DR. M. ALLEN STARR, of New York, followed with a paper on

BRAIN-TUMORS.

He said that the two great obstacles to operating on brain-tumors were the difficulty of accurately locating them and the difficulty of reaching them. It is only when the tumor is small and lies upon, but does not involve, the cortex, that the prognosis can be said to be absolutely good. Out of 162 operations, 48 were cases in which no tumor was found; 7 in which the tumor was found but not removed; 35 in which the tumor was removed and the patients succumbed; and 72 in which the tumor was removed and the patients recovered. He also preferred the flap-operation.

DR. CHARLES L. DANA, of New York, read a paper on

THE VALUE OF CRANIOTOMY FOR IMBECILITY AND EPILEPSY.

He had found after excluding the older operation, which did not fairly represent the surgery of the present time, 22, of which 6 had been improved, 10 unimproved, and 6 died. Congenital idiots and imbeciles were the two classes most likely to be benefited by operation of this kind, and the most that could be expected was a mental and physical improvement. He felt convinced that the operation produced its effect by its profound impression and consequent disciplinary influence.

DR. B. SACHS, of New York, read a paper on the

SURGICAL TREATMENT OF EPILEPSY.

He said that in New York City, at least, operations for the relief of this condition were much less frequent than formerly. Such surgical interference was particularly indicated before degeneration had taken place. Young children do not bear such operations at all well.

DR. JAMES W. PUTNAM, of Buffalo, read a paper on

CRANIOTOMY,

in which he referred to the more encouraging experience of Buffalo surgeons in this class of operations. It could not be denied that but few were benefited, but even this small hope was worth an effort when one considered the pitiable condition of the individuals for whom relief was asked.

DR. GEORGE WOOLSEY, of New York, continued the discussion. He said that in only one of his eight operative cases could it be strictly said that a cure had been effected. He favored operating with carvers' chisels, ground upon their outer surface.

DR. WILLY MEYER, of New York, read a paper on

HETEROPLASTY, WITH CELLULOID TO COVER DEFECTS IN THE SKULL,

in which he described his experience with this particular material. He had had difficulty in obtaining the celluloid in sufficiently thick plates, but now that obstacle had been surmounted.

DR. JOSEPH COLLINS, of New York, thought that the preceding speakers had presented too gloomy a view of the present status of cerebral surgery. It should be

borne in mind that operation was the only hope of relief in purulent infiltration of the brain, which in 35 per cent. of all cases was the result of chronic purulent otitis.

DR. FLOYD S. CREGO, of Buffalo, spoke in much the same strain. He believed that a very common error was made by surgeons in failing to continue medical treatment after the operation. In his opinion it should be persisted in for two years.

DR. E. B. ANGEL said that there was no necessity for performing heteroplasty, as the deficiency was filled in with very dense fibrous tissue.

DR. W. C. KRAUSS, of Buffalo, read a paper on the

TREATMENT OF SCIATICA WITH NITROGLYCERIN,

in which he said that this line of therapeutics had yielded him so much better results than other methods of treatment that he felt impelled to advocate its trial in all cases of sciatica before resorting to other medication. He reported seven cases which had been markedly benefited by the administration of nitroglycerin in doses of 1 minim of a 1 per cent. solution three times daily. He did not claim that it cured *every* case, but only a fair percentage.

PROF. JAMES H. ETHERIDGE, of Chicago, delivered an address on

DEFICIENT EXCRETION FROM KIDNEYS NOT ORGANICALLY DISEASED IN SOME OF THE DISORDERS PECULIAR TO WOMEN,

which will appear in a subsequent issue of THE MEDICAL NEWS.

DR. BULKLEY said that fifteen years or more ago he had incidentally discovered that the course of eliminative treatment employed by him in most cases of skin-disease not infrequently exerted a marked influence on menstrual irregularities and difficulties. This had happened so frequently that some of his patients had brought to him other members of the family simply to have them treated for menstrual disorders. That his treatment was essentially that laid down in the paper was shown by the fact that it was his habit to prescribe fifteen grains of acetate of potassium, with a little cascara and nux vomica, before each meal, using as a vehicle the extract of rumex.

At the evening session DR. ROSWELL PARK, the President, delivered his anniversary address, taking for his theme

THE VALUE OF THE COMPARATIVE METHOD IN THE STUDY OF PATHOLOGY.

(See THE MEDICAL NEWS, February 1st, page 113.)

THIRD DAY—JANUARY 30TH.

DR. W. G. MACDONALD, of Albany, read a paper on THE REORGANIZATION OF THE CORONER'S SYSTEM.

He recommended the appointment of a medico-legal officer by the Appellate Division of the Supreme Court, for a term of five to seven years. This officer would thus be removed as far as possible from politics, and his duties would be entirely medical, the legal portion being attended to by the usual court machinery.

DR. RUDOLPH WITTHAUS, of New York, said that it

was hoped that with the co-operation of the State Bar Association this Society would be able to have passed through the present Legislature a bill having provisions similar to those recommended in Dr. MacDonald's paper.

HON. TRACY C. BECKER, DRS. BALCH and H. BENDER all spoke in much the same strain, and, on motion, the President was requested to appoint an auxiliary committee of twenty-five or more.

DR. W. BROWNING, of Brooklyn, read a paper on DEVELOPMENT OF MUSCULAR ATROPHY ON A BASIS OF OLD INFANTILE SPINAL PARALYSIS, A FAVORITE TYPE.

He said that his experience in this class of cases had warranted him in drawing the following conclusions: (1) that infantile spinal paralysis is sometimes followed by further atrophy at a subsequent period; (2) that the assumption that it is due to extension of the cord-affection could not be accepted in most instances; (3) in the young some other peripheral affection is present; and (4) disuse, poor nutrition, and exposure are powerful etiological factors.

DR. M. A. VEEDER, of Lyons, read a paper on

NEURITIS COMPLICATING DISLOCATIONS OF THE SHOULDERS AND ELBOWS.

He said that the ulnar and median nerves were liable to become involved in dislocations at the elbow, and the symptoms varied according as the trophic, motor, or sensory filaments of the ulnar nerve were involved. At the shoulder the impairment of the muscles might lead to a recurrence of the dislocation almost spontaneously when the arm was placed in certain positions. Sometimes the full effect of the damage done to the nerve might not appear for several months. In dislocation of the humerus, the axillary structures were apt to be put on the stretch, and if the elbow were pulled out from the body, a powerful leverage would be exerted in such a way as to increase this traction on the axillary nerves. Massage and electrical treatment were of service.

DR. W. HAILES, of Albany, read the histories of two cases of

DIFFICULT PERINEAL AND SUPRAPUBIC LITHOTOMY.

DR. M. L. FOSTER, of New York, read

SOME NOTES ON TRACHOMA.

He objected very strongly to the use of the term "granular lids," which not only had no very definite meaning at the present time, but served to give the impression that the case was incurable, when, in fact, it might be perfectly amenable to treatment. He preferred the term "follicular conjunctivitis." Regarding the disputed germ-origin of this condition, he said that at present there was no positive evidence that it was due to micro-organisms.

A number of other papers were read by title.

PRESIDENT WILSON, of the Board of Health of New York City, strongly recommends that all rear tenements be abolished as a constant and uncontrollable source of disease. There are more than 2500 of these damp, filthy, and ill-ventilated buildings which house a population of nearly 60,000 people.

NEW YORK ACADEMY OF MEDICINE.

General Meeting, January 16, 1896.

JOSEPH D. BRYANT, M.D., PRESIDENT, IN THE CHAIR.

THE BACTERIOLOGY OF EMPYEMA IN CHILDREN.

DR. HENRY KOPLIK said that the bacteriology of pleuritic exudates had been materially advanced in recent years. There were several varieties of empyemas in children, *e.g.*, (1) meta-pneumonic; (2) streptococcus empyemas; (3) tubercular empyemas; and (4) fetid empyemas. In meta-pneumonic pleuritis the pneumococcus might from the outset attack the pleura with great severity, while the resulting pneumonia might be so slight as not to give rise to noticeable symptoms. In a series of fifteen cases of empyema in children he had found that in nine, or 6 per cent., the diplococcus of pneumonia was present in pure culture. In a little over 3 per cent. of the meta-pneumonic pleuritis the streptococcus was also present, but did not appear to affect the prognosis. Empyema in children may arise from a slight streptococcus-infection of the throat, or a slight wound-infection, but in those empyemas which are associated with severe sepsis, as in scarlet fever, the streptococcus is very virulent and the prognosis is accordingly more grave. The tubercular empyemas are not so frequent as the meta-pneumonic and streptococcus varieties, but as a rule the prognosis is bad. They are accompanied by great thickening of the pleura. The fetid empyemas might be conveniently divided into (1) those due to a streptococcus- or pneumococcus-infection, and (2) those due to mixed infection. The speaker said that in his experience those empyemas in children in which there had been an attempt at spontaneous cure by perforation through a bronchus were very prone to be fetid. In children fully two-thirds of the empyemas are meta-pneumonic.

THE DIAGNOSIS AND PECULIARITIES IN CHILDREN.

DR. AUGUST CAILLÉ said that in children the infection of the pleura was very frequently secondary, and that exposure to cold could only be considered a predisposing cause of empyema. Of eighty cases coming under his notice, sixty-seven had been in children under five years of age. Probably one-third of all the pleuritis occurring in early life are purulent or sero-purulent, and in gangrene of the lungs or in pyothorax due to traumatism the empyema is apt to be of the fetid variety. The change of a simple pneumonia into a pleuro-pneumonia should not be difficult to recognize. In the former the child cried freely without exhibiting any sign of pain; in the latter it was quite apparent that crying and coughing, and even the act of respiration, were painful. Inspection would show lateral curvature of the spine, bulging or retraction of the intercostal spaces on inspiration, displacement of the heart; but all these signs would not be present in every case. Moderate dyspnoea and bulging of the affected side were, however, usually present in cases of pleuritic effusion. The fever was apt to be irregular, but might be altogether absent, as in cold abscesses elsewhere. In cases of pleuritic effusion palpation would show bulging of the intercostal spaces on inspiration, and an absence or diminution of vocal fremitus. In some in-

stances there would only be a diminution of the fremitus as compared with another part of the thorax, and in any case to detect the change in the fremitus it was necessary to make the child cry. On auscultation, if there were a sufficiently thick layer of fluid between the lung and the ear, the respiratory sounds would be diminished, but tubular breathing might be heard over the fluid, being transmitted from the compressed or inflamed lung-tissue. Diminished vesicular breathing and fremitus with dullness would point to thickening of the pleura. Where the effusion was considerable, egophony might be audible in the axillary line. Bronchophony would be heard over the consolidated lung, but not over the fluid. Percussion would reveal flatness over the area of fluid effusion, and would also impart to the finger used as a pleximeter a distinct feeling of unusual resistance. It should be remembered that in children an apparent dullness on the right side posteriorly is not necessarily pathological. If the percussion were made quite forcibly, the resonance of the underlying lung might be brought out. When there is sufficient fluid to compress the lung the lower portion of the chest will be flat on percussion, and there will be an absence of breath-sounds; while over the upper portion there will be an increase in the respiratory sounds. The change in the level of the fluid resulting from causing the patient to change his position is not easily detected in young children. The only way to make a positive diagnosis of fluid pleuritic effusion in a little child and of determining the nature of this fluid is by puncture with an aspirating-needle. Before doing this the site of the proposed puncture should be made surgically clean, and then, with the child's arm held upward, a clean needle is plunged into an intercostal space to the depth of one or two inches. Unless the character of the fluid is perfectly apparent, it should be subjected to microscopical examination. On the withdrawal of the syringe the puncture should be dressed with adhesive plaster or gutta-percha tissue. There is no danger of injuring the liver if the puncture on the right side is not made below the eighth intercostal space. Even in desperate cases an incision should be promptly made after establishing the diagnosis of empyema, and it should be borne in mind that even in those cases in which a perforation into a bronchus has already occurred the pus will frequently not escape until the intrathoracic pressure has been relieved by an incision into the chest. The only satisfactory explanation of the manner in which the lung is reinflated after such an opening has been made into the chest is, that it is due to the mechanical effect of coughing, the air being driven in the direction of the least resistance, which in this case is from the sound to the crippled lung.

THE TREATMENT OF EMPYEMA IN CHILDREN.

DR. JOSEPH E. WINTERS said that the natural history of empyema furnished the indications for treatment, and these were to remove the pus, prevent reaccumulation, procure complete expansion of the lung, and prevent deformity of the chest. An empyema got well, not by healing from the bottom, but by the expansion of the lung and the ascent of the diaphragm, and consequently the removal of a portion of the pus by aspiration prior to incision was harmful, as the diminished

pressure so produced made the expansion of the lung more feeble. It was by this expansion of the lung that the fluid was expelled from the thorax. As soon as the inflammatory process had subsided an incision should be made into the chest. In his opinion, it was because of the earlier diagnosis and treatment of this condition at the present time, rather than because of improved methods of treatment, that the mortality from empyema had been so reduced. He felt that at present there was too great a tendency to resort to resection of one or more ribs in recent cases of empyema. This operation was not indicated in such cases, because we did not desire a falling in of the chest until after the lung had fully expanded, and, moreover, resection of the rib was followed by a much higher mortality than was simple incision.

Where there was no cyanosis present, the incision into the chest might be done under an anæsthetic, and for this purpose chloroform was preferable, but the anæsthesia should be only partial in order that the patient might cough and aid in the expulsion of the pus. Before making the incision an aspirating-needle should be inserted, and if this detected fluid the needle should be left in place and used as a guide to the knife in making the incision. This incision should be at least two inches long, and should be made two to three inches above the base of the normal thoracic cavity. During the operation the patient should be placed on the affected side and close to the edge of the table. In this position it was possible to irrigate the pleural cavity carefully and safely and so remove coagula. Hot water should be used for this purpose. The speaker favored giving the child immediately after the incision had been made a teaspoonful of whiskey, undiluted, as when thus given it acted as a stimulant and also excited cough and crying. During convalescence massage and systematic chest-exercises were useful, and experience had shown that forced expiratory effort, such as occurs in blowing wind-instruments, was an efficient aid in securing complete expansion of the lung.

DR. A. JACOBI said that while he concurred in the statement that as the diagnosis of empyema had been more promptly made, the term "chronic pneumonia" had been less frequently heard, he wished to call attention to the fact that an interstitial pneumonia was of common occurrence in children, and was responsible for a persistence of the symptoms and physical signs long after the usual time. Persistent fever and dullness after an ordinary pneumonia might not, therefore, mean a secondary empyema, but the occurrence of an inflammatory peribronchial infiltration, which might very properly be termed a chronic pneumonia. These symptoms, under such circumstances, might last for six or eight weeks.

DR. B. SCHARLAU said that on looking over his hospital-records for the past five years he found that he had performed resection of the ribs for empyema between one and two hundred times—in fact, after a fair trial of other methods of treatment, he now did this operation to the exclusion of all others. He did this because such a line of treatment seemed to him more in accordance with the principles guiding us in the treatment of other abscesses and because complete recovery was more rapid after rib-resection than after other treatment. He had found that in about 50 per cent. of the cases of

empyema there were present coagula which were too large to escape through the small incision ordinarily made. Some of his patients had recovered in ten days after resection of a rib, and it was not at all uncommon for recovery to be complete in three weeks, whereas after simple incision convalescence usually occupied six or eight weeks. He had never found that the resection of a portion of the rib led to malformation of the chest. Most of those who advocated simple incision had never given rib-resection a trial.

DR. W. P. NORTHRUP said that his observations on empyema had been for the most part on children under three years of age, and next to tubercular meningitis he considered the diagnosis between fluid effusion and pneumonia in an infant of eighteen months the most difficult. The most important physical signs were one-sided dullness and the absence of vesicular breathing. He frequently found it impossible for him to distinguish the bronchial breathing occurring in connection with a moderate effusion from that associated with pneumonia. From these considerations, it followed that one must early resort to the use of the aspirating-needle in many cases, and in doing this it was most important that the result of this procedure could be relied upon, which was not true, unless a needle of very large calibre was employed, and inserted in two or three places, if the first puncture proved to be negative. The site of puncture and the needle should, of course, be carefully sterilized. After careful observation on many cases he felt warranted in saying that the drainage of the cavity would be perfect, no matter how the incision into the chest was made. It was ordinarily well to select the sixth intercostal space, and in children under two years of age the incision should be made nearly two inches in length, and two drainage-tubes should be inserted side by side. The practice at the present time did not seem to be in favor of resecting a rib in these young children.

DR. HENRY D. CHAPIN said that he did not know of any other common disease of childhood in which so many little ones lost their lives as a result of a tardy diagnosis as in empyema. The younger the subject the more difficult was it to understand the physical signs. In his experience there was no bulging of the chest with a moderate fluid effusion, and this was probably due to the fact that the lung, and not the chest-wall, furnished the least resistance. Bronchial respiration was commonly heard all over the fluid. As the majority of cases of empyema in children seem to follow pneumonia, the physician should be ready to make exploratory puncture as soon as it is evident that the symptoms and signs of pneumonia are persisting for an unusual time. A large needle should be employed. If in the course of such a pneumonia we found beginning dullness at the apex, there was good reason for believing that an effusion into the pleural cavity had occurred, and had pushed up and compressed the lung. He had tried rib-resection in a few cases, but in some of these, as in the hands of surgeons of known experience, sinuses had persisted; and, as his results from simple incision had been satisfactory, he could see no good reason for resecting a rib in infants.

The PRESIDENT being called upon for an expression of opinion on this point, stated that his experience had convinced him that recovery was more rapid after rib-resection.

DR. FLOYD M. CRANDALL said that two important facts had been elicited by this discussion, viz.: (1) That empyema in young children was almost always secondary, frequently to pneumonia; and (2) that the diagnosis of this condition in such young patients was very difficult. These facts should teach us to be charitable to brother-practitioners who happen to make mistakes in the diagnosis of these cases.

DR. CAILLÉ said that irrigation of the pleural cavity had been almost abandoned, because it broke up the adhesions between the lung and thoracic wall.

DR. WINTERS said that he was very much opposed to resection of a rib in these cases as a primary procedure, because in children under two years of age the death-rate from this operation was 80 per cent., whereas after simple incision it was only about 25 per cent. Recent personal inquiry had elicited the fact that in most of the hospitals of Europe this practice of resecting a rib in cases of empyema had been abandoned. He was also of the opinion that the difficulty of making the diagnosis of empyema in young children had been exaggerated, for if the examiner was careful to make the patient inspire deeply, the sound was totally different from that produced by consolidated lung.

REVIEWS.

CUTANEOUS MEDICINE, A SYSTEMATIC TREATISE ON THE DISEASES OF THE SKIN. By LOUIS A. DUHRING, M.D. Part I. Philadelphia: J. B. Lippincott & Co., 1895.

THE appearance of a new systematic treatise on diseases of the skin by Dr. Duhring is an event of much importance in the history of American medicine. In the year 1876 this distinguished clinician and author gave the world what was then the most condensed practical and trustworthy text-book on dermatology extant, and its signal merits were so much appreciated abroad that it was translated into the French, Italian, and Russian languages, and was very widely read. In America three large editions were published, the last of which appeared in 1882. It thus happens that this book was the chief source from which most American students derived their knowledge of skin-diseases. Now, after a period of twenty years, during which Dr. Duhring has zealously devoted himself to his chosen line of study, he lays before us this mature work, which promises to be one of the most important additions to American medical literature ever published, and which will readily take an assured position beside similar works of foreign authors. The scope of this work, of which we have now the first part, containing 220 pages, is laid on broad, practical, and conservative lines. In his preface Dr. Duhring says:

The author is convinced that the skin occupies a more conspicuous place in medicine than has heretofore been accorded to it. It is a large, complex, important organ of the body, and is by no means a mere protective covering. It is not only subject to many diseases which are wholly confined to the skin, but it is also intimately connected with numerous general morbid processes, to describe and to point out the significance of which is within the province of cutaneous medicine.

In the part now published the groundwork of dermatology is considered, and in each section we find the

subjects treated in a careful, clear, and ample manner. The author, while he gives his own views in detail, is exhaustive in his presentation of the facts and opinions held by all accredited authors. There is evidence on every page of deep and broad research and mature thought. We do not find a mere categorical statement of facts and opinions, but, what is necessary in works of this class, a thorough and judicial study and sifting of all statements, followed by a lucid and homogeneous presentation. The chapter on the "Anatomy of the Skin" is exhaustive, occupying fifty-two pages. It is very clearly and simply written, and the text is illustrated by a very large number of figures drawn by the most experienced authors in histologic and pathologic anatomy. The physiology of the skin is likewise treated in a thorough manner.

The section on "General Symptomatology" is so full, comprehensive, and clear that it will be a great aid alike to the student and general physician. The same remarks apply to the sections on etiology, pathology, treatment, and prognosis.

While the work is almost exhaustive, it is written in such simple and clear language that its perusal is a pleasure rather than an effort.

THE ART OF COMPOUNDING. A TEXT-BOOK FOR STUDENTS AND A REFERENCE-BOOK FOR PHARMACISTS AT THE PRESCRIPTION-COUNTER. By WILBUR L. SCOVILLE, PH.G., Professor of Applied Pharmacy and Director of the Pharmaceutical Laboratory in the Massachusetts College of Pharmacy. 8vo. pp. 255. Philadelphia: P. Blakiston, Son & Co., 1895. Price, \$2.50.

THIS is a book for the pharmacist rather than for the physician, although it deals with a number of matters with which medical men could with advantage be familiar. It were really a desideratum that the practising physician should know, both theoretically and practically, more than he does concerning the physical properties of the drugs that he uses, and that he should have a working familiarity with the methods employed in their compounding, together with the results of this process. That physician is a better prescriber, not to say therapist, who has an understanding of the science and art of pharmacy. To these ends the book in hand will aid. It will, however, find its greatest field of usefulness among pharmacists and students of pharmacy, and to these it is to be warmly commended. As is well pointed out in the introductory remarks, "Skill involves . . . first, mental knowledge and the power to rightly apply it, and, second, manual dexterity." These objects will be furthered by a judicious use of this book.

AN ATLAS OF OPHTHALMOSCOPY, ETC. By DR. O. HAAB. Translated and edited by ERNEST CLARKE, M.D., B.S., London. New York: William Wood & Co., 1895.

WE are glad to have in English and in so handy a form Haab's pictures of the eye-ground. With a few exceptions they are excellent, and give most faithfully the appearances seen with the aid of the ophthalmoscope. We cannot help wishing that there had not been attempted the so-called shot-silk retina. It is impossible to repro-

duce in the first place, and this special attempt should warn all others hereafter against such an undertaking. If the bull may be pardoned, we have never seen the papilla so utterly invisible, as here represented, in the early stages of optic neuritis. The text accompanying the illustrations is printed in three different positions upon the pages, so that one is provoked to be compelled to reverse the holding of the book with every alternate turning of the leaves. There is an introduction of about fifty pages concerning the ophthalmoscope, methods of examining the eye, etc., which will be found of use by students.

A TEXT-BOOK OF CHEMISTRY, INTENDED FOR THE USE OF PHARMACEUTICAL AND MEDICAL STUDENTS. By SAMUEL P. SADTLER, Ph.D., and HENRY TRIMBLE, Ph.M. 8vo. 922 pages and index. Philadelphia: J. B. Lippincott Co.

It must be regretted that the authors of this book decided to attach the word "medical" to its title. Such a term can have only a commercial significance, for the book is not written from the standpoint of the medical chemist. Of its excellence as a manual of general chemistry and of its value to students of pharmacy and industrial chemistry it is needless to speak. Its authors are too well known as successful teachers and investigators in these departments to leave any doubt as to the character of their present work. It is true, also, that such a term as "medical chemistry" is rather arbitrary, since the facts and theories of the science have universal application, but it is also true that in the exigencies of modern medical teaching it is necessary to develop in considerable detail some phases of chemistry, while others are not to be so extensively discussed. All sciences may be viewed from the point of their practical use, and there will be different perspectives for different points. In the present work the perspective is not that of either the medical teacher or student. There are two pages devoted to the manufacture of alizarin and a page and a half devoted to a description of the ptomaines. The chapter on qualitative analysis is devoted wholly to the usual system of detecting acids and bases by routine tests. No description is given of the tests used in clinical work, nor does toxicology receive any more than passing notice.

We have noted above that as a manual of general chemistry it is highly commendable. We think it a little bulky. Students are able to use books printed with smaller type than this, and it is an advantage to have a handy volume for college-uses. Since the authors are both actively connected with pharmaceutical work, it is to be expected that they should follow the *Pharmacopœia* closely. The work is well printed and contains a large amount of information.

THE EVOLUTION OF THE DISEASES OF WOMEN. By W. BALLS-HEADLEY, M.A., M.D. (Cantab.), F.R.C.P. (London), Lecturer on Midwifery and the Diseases of Women in the University of Melbourne, etc. Pp. 375. London: Smith, Elder & Co., 1894.

The scope of this book is unique, in that it is concerned with the evolution and natural history of various pathologic processes in women. In the words of the author, the plan "is to show the states of the sexual

relations as they have evolved in the human race, and the position at which they have now arrived, with their causations and influences on woman; and to trace their influence through their progressive stages, so far as they have tended in the direction of disease. Also to indicate the mode of prevention of such causes of disease, and of such disease not only in the social but also in the medical aspect." Much of unwritten medicine, it will be seen from the foregoing quotation, must be touched upon in the volume, and this has been accomplished in a modest and acceptable manner. It is presented in the first portion of the book, while the etiology, symptomatology, prognosis, and prophylaxis of the commoner gynecologic conditions comprise the bulk of the remainder of the work. In describing these various pathologic conditions the author endeavors to elucidate the course or evolution of the morbid processes, but naturally in many instances does not succeed in doing so, owing largely to the paucity of our knowledge of these diseases. Aside from the laws of sexual hygiene, which are rather fully entered into, and which in most books on gynecology are largely ignored, there is but little new in the book. The style is fair and the reading interesting, but as far as practical usefulness is concerned but little can be said. There is absolutely nothing in the line of therapeutics except a few general directions at the close of the volume. The author has evidently had in mind a theory which he has not been able to present in a satisfactory manner, and some of the views advanced as to the evolutionary nature of the various processes considered are not altogether acceptable, at least in this country.

PHYSICAL, INTELLECTUAL, AND MORAL ADVANTAGES OF CHASTITY. By DR. M. L. HOLBROOK, Editor of the *Journal of Hygiene and Herald of Health*. New York: M. L. Holbrook & Co.

THIS is a well-written little book of 120 pages, in which the author aims to set forth a high ideal of life, and instead of dilating on the evils of unchastity to point out the advantages of chastity. It is a book that can be placed in the hands of the young of both sexes with profit to them, and physicians by recommending it will show that they do not encourage the commonly held opinion that for young men at least abstinence from sexual intercourse is prejudicial to health.

INDURATIVE MEDIASTINO-PERICARDITIS. By THOMAS HARRIS, M.D., F.R.C.P. London: Smith, Elder & Co., 1895.

DR. HARRIS has written a most interesting monograph upon the subject indicated by the title, reporting a number of cases and analyzing the literature. Pathologically he recognizes three classes of cases of chronic inflammatory conditions involving the pericardium and mediastinum. Class I. comprises the cases properly termed indurative mediastinal pericarditis, in which there are adhesions to the surrounding parts, and not unfrequently caseous affection of the lymphatic glands of the mediastinum. Class II. is more frequent, and includes those cases, sometimes termed pericarditis externa and interna, in which the sac is thickened and adhesions have formed to surrounding parts, but with very

little general mediastinitis. Class III. comprises instances of fibrous mediastinitis without any internal pericardial adhesions.

He recognizes the inability in many cases to distinguish clinically one of these pathologic forms from another, though the third class may be distinguished from the other two during life, at least in some instances.

The author then proceeds to report three cases (one of each class), which were followed systematically from an early stage to the termination and post-mortem examination. He tabulates twenty-two additional cases collected from the literature, including only such as contained both the clinical and pathological examinations. It is impossible to detail as fully as we could wish the facts established by this most interesting little work, but we commend it warmly as a careful study in clinical pathology.

AM ELEMENTARY COURSE IN EXPERIMENTAL AND ANALYTICAL CHEMISTRY. By JOHN H. LONG, M.S., Sc.D., Professor of Chemistry and Director of the Chemical Laboratories in the Schools of Medicine and Pharmacy in the Northwestern University. Small 8vo. 497 pages and index. Chicago: E. H. Colegrove & Co.

We are pleased to recognize in this manual another evidence of the tendency to abandon the use of a course in qualitative analysis for practical instruction for beginners in chemistry. Dr. Long rightly observes that the system gives a distorted view of the relative importance of that department of chemistry. The complex problems set for the student in the usual qualitative course are not representative of the actual work either of research or commercial analysis. The classification by means of the so-called "group-reagents" is not a scientific one, but a purely arbitrary arrangement for a narrow practical purpose.

In the present work Dr. Long devotes over two hundred and fifty pages to the experimental part; that is, detailed directions for performing two hundred and twenty-six experiments, exhibiting the properties of elements and important compounds, and the general principles of chemistry. There are but twenty-two illustrations in this part, and most of these are not particularly commendable. We think it would be wise to illustrate such works quite freely, selecting the simplest apparatus, and to give a preliminary chapter of some length on the forms and uses of the standard articles, test-tubes, dishes, etc.

In the section on qualitative analysis the usual group-reagents are used. There are also chapters on spectroscopy, toxicology, and volumetric analysis. The decimal system of weights and measures is employed. The work is well printed.

MEDICAL AND SURGICAL REPORT OF THE CHILDREN'S HOSPITAL, 1869-1894. Edited by T. M. ROTCH, M.D., and HUBERT L. BURRELL, M.D. Boston: Published by the Board of Managers, 1895.

THIS handsome volume of 367 pages is published with the view of presenting to the community, first, the history of an institution organized and maintained for

the care of sick and disabled children; secondly, in order to show, by the contributions of the members of its medical staff, how much good work has been done, and the most efficient methods known to medical science of accomplishing its object; and, thirdly, of offering carefully prepared articles, based largely on the practice of the hospital, on various topics of importance in the science of medicine. For this purpose the matter is divided into three parts, under the headings "Administrative," "Medical," and "Surgical." Of these the last takes up fully two-thirds of the volume, and presents quite a comprehensive view of this branch of the hospital's work and of its method of treatment. Orthopedics naturally holds a prominent place, and is quite fully illustrated. The medical division embraces only seven short papers, which, however, are of unusual interest. It is to be regretted that greater space was not devoted to this portion of the hospital's service.

The volume is a handsome specimen of book-making, and is creditable alike to the institution whose work it thus brings to public notice, and to the various members of the staff whose unselfish labors have made the hospital what it is to-day.

A MANUAL OF THE PRACTICE OF MEDICINE. By GEORGE ROE LOCKWOOD, M.D., Professor of Practice in the Woman's Medical College of the New York Infirmary, etc. 8vo. pp. 935. Philadelphia: W. B. Saunders, 1896.

We think that the author of this *Manual* has succeeded in his aim to present "the essential facts and principles of the practice of medicine in a concise and available form," although we cannot encourage his hope that it "will meet the requirements of those who heretofore have been obliged to resort to the larger works of reference, with which medical literature is so well supplied." We believe that there is greater need for the "larger works" in the higher medical education of the day, and that the supply is none too large, although the lesser can be made to serve a useful purpose as adjuvants to this end. For the manner in which the author has performed his task we have only words of commendation. Within a comparatively limited space he has succeeded in reciting clearly and tersely the essentials relating to the practice of medicine, and on the whole he has displayed good judgment in his attitude toward debatable questions. By the use of thin paper of good quality, the volume has been kept within reasonable proportions, and the clearness and size of the type, as well as the typographic arrangement and the press-work, make the reading easy. Of the illustrations, many are well executed, but most are not new.

We rather doubt the accuracy of the statement that "a few cases of typhus fever occur every year in New York and Philadelphia." No reference is made to the efficacy of pilocarpine in the treatment of erysipelas. In the treatment of appendicitis small doses of opium are recommended, while cathartics are interdicted. The designation "hysterical peritonitis" seems not a very happy one, for an inflammation of the peritoneum could not well be hysterical. A better term would perhaps be "pseudo-peritonitis," with or without qualification.



FIG. 1.—Small intestine containing cent, lead-pencil and gall-stone. The latter being organic matter is very indistinct.

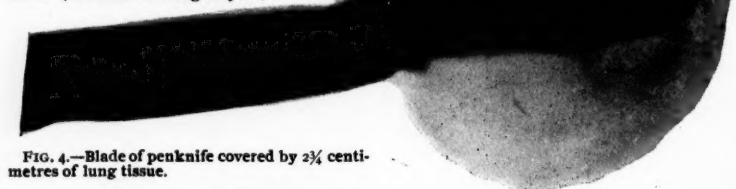


FIG. 4.—Blade of penknife covered by $2\frac{3}{4}$ centimetres of lung tissue.



FIG. 3.—Piece of rib covered with cirrhotic liver one centimetre thick.



FIG. 5.—Polydactylism with webbed fingers. Osseous union at tops of three phalanges. Extra phalanx at side. Outer and inner carpal bones double, the separation between left bones and the adjacent phalanges being discovered by this process. (Living subject, left hand.)



FIG. 2.—Six pins in centre of section of liver one centimetre thick.



FIG. 7.—Hand of cadaver. Two bullets inserted from palmar surface; piece of glass beneath round bullet. Lateral luxation of terminal phalanges of ring finger. Amputation of middle finger. Crush of central portion of index finger.

RÖNTGEN-PICTURES OF MEDICAL SUBJECTS,

Taken by HENRY W. CATTELL, M.D., in the Physical Laboratory of the University of Pennsylvania, with the kind permission of PROF. ARTHUR W. GOODSPEED.

For THE MEDICAL NEWS, New York, Feb. 15, 1896.